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APRIL 2005

Destination America

Seven Special Places to Visit This Summer

Eudora Welty's Garden
Little Bighorn Battlefield
Pacific Crest Trail
Milwaukee Art Museum
New Mexico's Ojo Caliente Spa
Key Largo's Underwater Park
Cape Cod's Scenic Highway

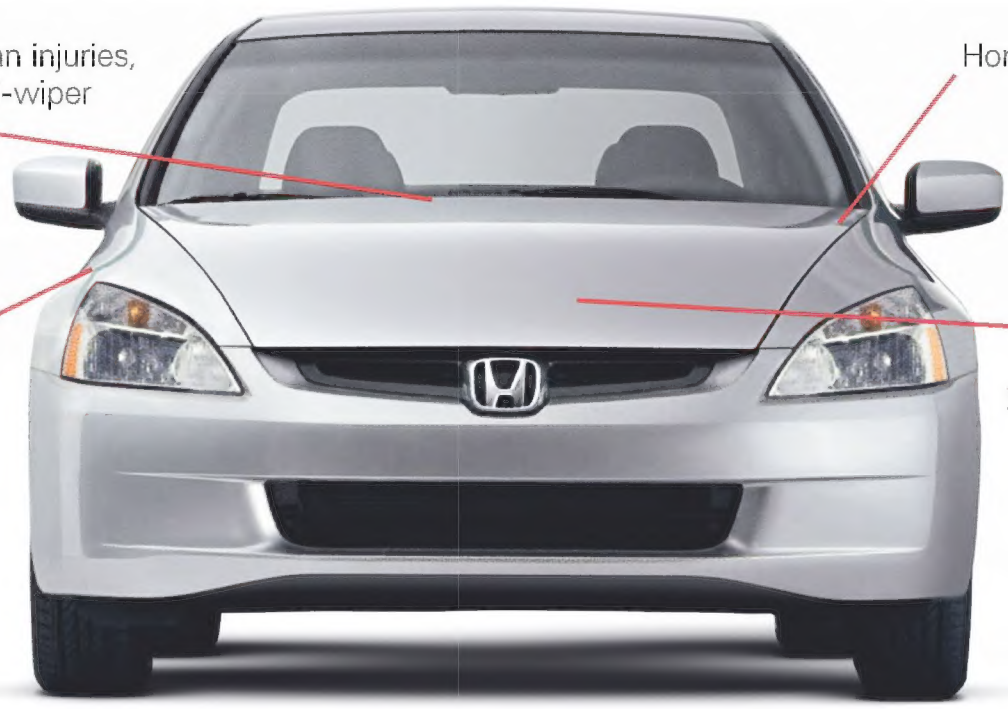
80 Years After Scopes, Evolution Is Still on Trial in Dayton

Inside the Hidden World of an Amazon Tribe

The Conquest of Polio: How Jonas Salk Changed the World

Salvador Dalí: Impresario of the Surreal

Every car company is con
inside its cars. But what a



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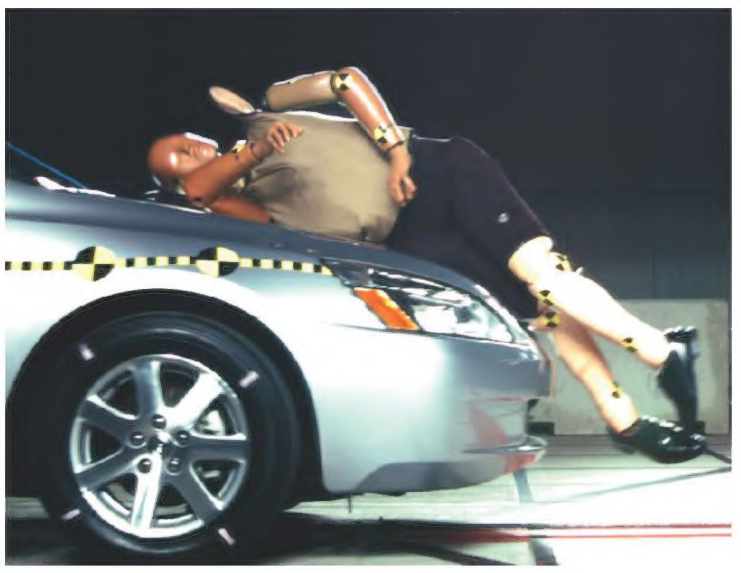

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Deep in the Amazon, one man struggles to protect the isolated Korubo tribe from loggers, settlers and missionaries. Is he saving the Indians' unique culture—or cruelly depriving them of modern blessings? **TEXT AND PHOTOGRAPHS BY PAUL RAFFAELE**

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A half-century ago, researcher Jonas Salk's vaccine against a scourge was, at long last, deemed safe and effective

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"At the top of a slope stand about 20 naked Indians—the women with their bodies painted blood red, the men gripping formidable-looking clubs."

—"OUT OF TIME," PAGE 62

PAUL RAFFAELE

The semi-nomadic Korubo tribe of Brazil's Javari Valley know nothing of cars, Christianity or Cervantes.

COVER:
The historic Pacific Crest Trail (Punchbowl Falls, Oregon) extends 2,650 miles from Mexico to Canada. Photograph by Bart Smith

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"The Scopes trial ran for eight days in the middle of a July heat wave. The big courtroom got a new coat of paint and was outfitted with 500 additional seats and a platform for a newsreel camera."

—"EVOLUTION ON TRIAL," PAGE 52

John Scopes (seated, below, at right) agreed to be arrested for teaching evolution.

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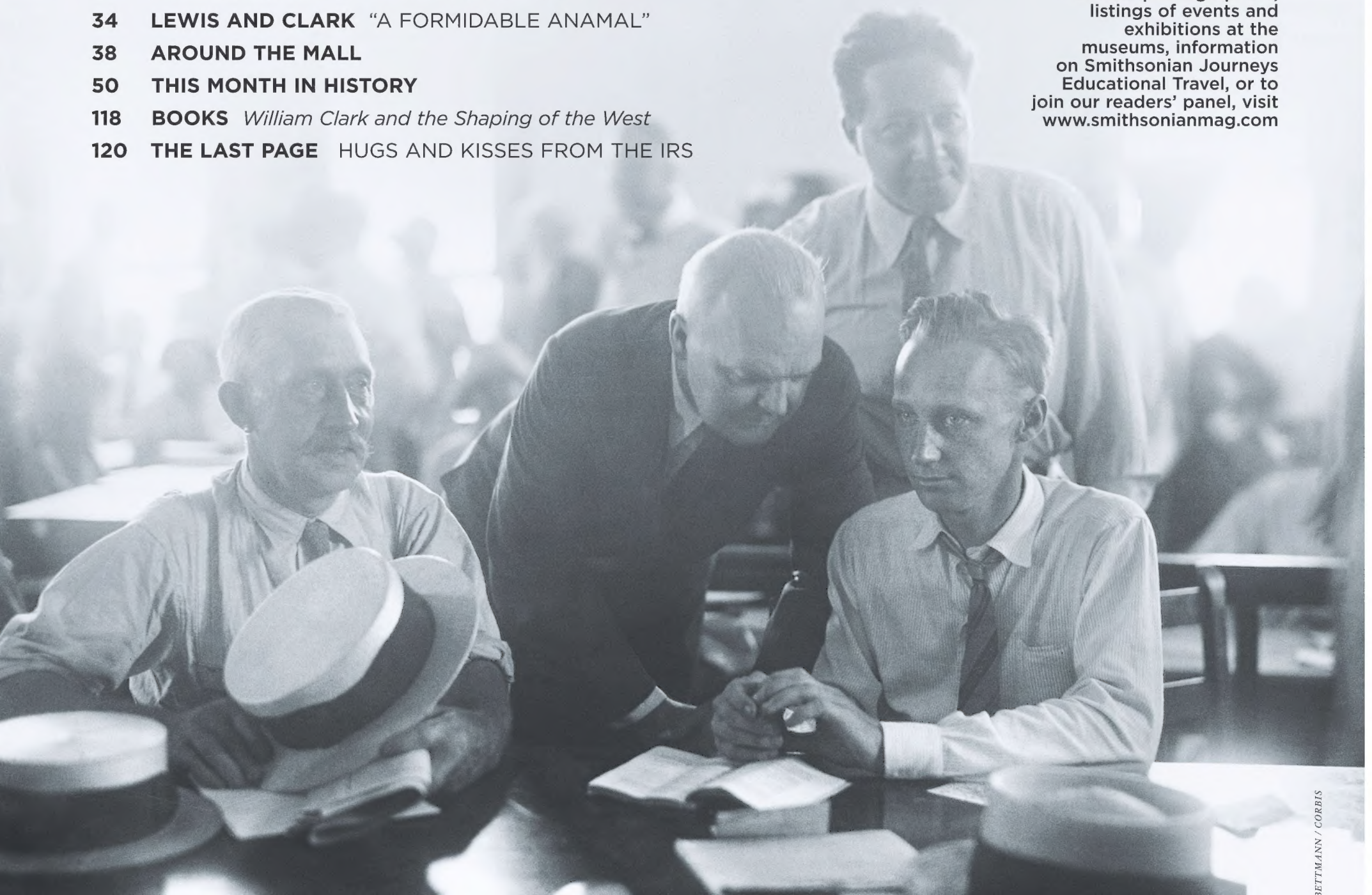

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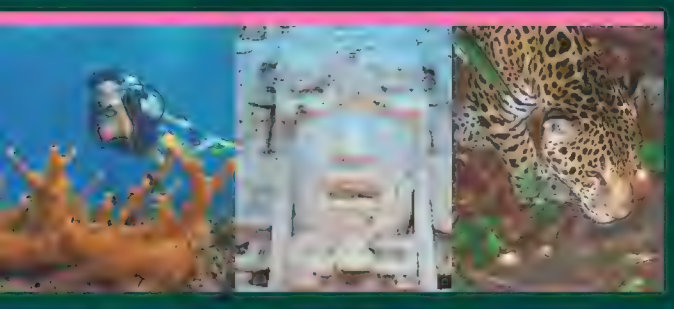

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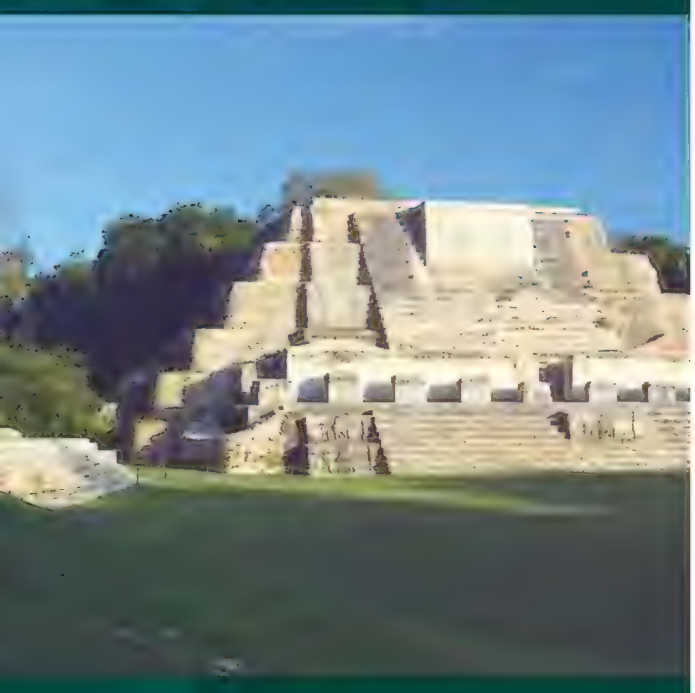

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"THE PLAYWRIGHT AND HIS 'MOLLISIMA' IN PURSUIT OF LOVE"

November 1990, p. 154

In his later years, Irish playwright George Bernard Shaw enacted his own romantic denouement with an aspiring American actress named Molly Tompkins. Their tumultuous 10-year affair, featured in the November 1990 issue of *Smithsonian* magazine, would be the last in a lifetime of dalliances. Our literary adventure will also explore Dublin, the city James Joyce so vibrantly recreated in *Ulysses*, and the towns of Galway and Sligo, the latter of which William Butler Yeats called home and immortalized in his poem "The Lake Isle of Innisfree."

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Emerging from Caves

Science suffers a setback—and leads to a breakthrough

BY CAREY WINFREY

REPORTING HIS STORY about the good people of Dayton, Tennessee, where John Scopes was tried 80 years ago for teaching evolution in the public schools ("Evolution on Trial," p. 52), Steve Kemper wanted particularly to talk to Kurt Wise, a professor of science at Bryan College in Dayton. After all, Wise has a PhD in paleontology from Harvard and studied with the late, respected paleontologist Stephen J. Gould, an ardent foe of creationism. And Wise believes that God created the world 6,000 years ago.

But he was reluctant to be interviewed. "My only chance to speak with him was to accompany his class on a field trip to Grassy Cove Saltpeter Cave," says Kemper. "So I found myself crawling through a muddy cave on my stomach with a group of kids who believed it had been formed in a matter of hours." I think you'll agree that getting Wise to comment on the record was worth Kemper's slithering.

Kemper: Slithering in search of a comment.

And when Kemper asked Dayton resident Eloise Reed, 92, if she believed in evolution or in the Bible's account of the origins of life, she looked at him incredulously. "Why, the Bible!" she answered.

She is not alone in Dayton, which takes pride in its status as defender of the faith. One hotel has a Golden Monkey Lounge, and Dayton residents can obtain license plates proclaiming them citizens of "Monkeytown."

WHAT BROUGHT Jeffrey Kluger to the story of the victory over polio ("Conquering Polio," p. 82), he says, was "its clear and powerful arc." Like the Apollo 13 near disaster, the subject of a 1994 book coauthored by Kluger, Jonas Salk's relentless assault on the devastating disease was played out against a ticking clock. "Every year that a vaccine wasn't perfected was one more year in which 50,000 or more children could be sickened or killed," says Kluger. "What must it have felt like to the people in Salk's lab when May or June rolled in, the vaccine wasn't ready, and another summer was lost? And then what must it have felt like in 1955 when the vaccine was declared in April and that summer—as well as all the ones that followed—could be saved?"

THIS YEAR'S PHOTO CONTEST yielded no fewer than 27,000 entries. We are overwhelmed not only by the volume of submissions but by their quality. What remarkable photographers SMITHSONIAN's readers turn out to be! As I write, in the last week of February, we have winnowed each category down to fewer than 100 entries. We plan to pick the ten finalists in each category by the end of March and will post them on our Web site (www.smithsonianmagazine.com) April 1. We plan to publish the grand-prize winner and five category winners in our July issue. Great job, everybody!

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Invention at Play

The Lemelson Center celebrates a decade of nurturing the inventor in each of us

BY THE SUMMER of 1964, when the inventor of the sailboard, Newman Darby, launched his creation, he'd spent much of his life building boats and dreaming of making better ones. He was just 12 when he constructed his first. It sank, but he brought it ashore and turned it into a home for snakes. Two years later, he converted half a pup tent into a sail for a second boat and set off to explore the islands in the middle of the Susquehanna River, near where he grew up. Darby's early experiments with boats provided him with the knowledge of tools and materials that made his most successful inventions possible. Necessity may be the mother of some inventions, but it was boundless curiosity and persistence that fueled Darby's drive to invent, as it does for many innovators.

The Jerome and Dorothy Lemelson Center for the Study of Invention and Innovation was established to study that process, and to document the stories of innovators and their exciting discoveries. Through its traveling exhibition "Invention at Play," the center encourages young people and their families to be creative, and teaches them about the history of invention; the show, which includes one of Darby's sailboards, has traveled to cities and small towns all across the country. "Invention at Play," like the Lemelson Center itself, which is part of the Smithsonian's National Museum of American History (NMAH), makes the case that inventiveness and innovative thinking are not granted to a few inspired visionaries among us, but rather are qualities that are an inextricable part of being human. But they do need fostering, which is why the center reaches out to both adults and children, encouraging them to think of themselves as inventors.

This year, the Lemelson Center marks its tenth anniversary. Its mission is vital, for innovation is not only a recurring theme in American history but is also crucial to ensuring the sustained growth of the nation's economy. The center offers fellowships, conducts symposia and documentation projects, and disseminates cutting-edge scholarship through its book series with MIT Press. It has recognized the centenary of the Nobel Prize with an exhibition, a CD-ROM and an ambitious oral history project, and encouraged inventors to donate their papers, drawings and notebooks to libraries, archives and museums. Since 1995, the center's Innovative Lives program has brought inventors to the NMAH to speak to middle-school students and their teachers, and to be interviewed for posterity.

Darby made 300 sailboards to come up with the best design.

JEROME LEMELSON was another inventor who found inspiration everywhere. As a boy, he helped his father, a physician, by designing an illuminated tongue depressor. In 1951, when he was in his late 20s, he attended a demonstration of a metal lathe controlled by a punch card, which prompted him to imagine the untapped possibilities of increased automation in factories and a not-too-distant future when robots would be capable of measuring, assembling and moving materials, as well as even inspecting the quality of the finished products. Lemelson, who died in 1997, holds 594 patents, including those for important parts of VCRs, ATMs and cordless phones, making him one of the five most prolific inventors in the country's history. His brilliant ideas underlie everything from camcorders to compact cassette players to fax machines. He invented talking systems that warn pilots of bad weather, more efficient ways to manufacture goods, and even toys, such as a beanie with a propeller, which rotates when its wearer blows air through a small straw. In 1995, a generous grant from the Lemelson Foundation established the Lemelson Center; subsequent gifts raised the foundation's support to $41.5 million, ensuring that the nation's most comprehensive program to promote innovation will continue its important work. In the next few years, as renovations at the NMAH are completed, the Lemelson Center will open its permanent exhibition space to visitors, young and old—inventors all.

Lawrence M. Small
SECRETARY OF THE SMITHSONIAN INSTITUTION

JEFF TINSLEY / SMITHSONIAN INSTITUTION; DARBY WINDSURFING COLLECTION / ARCHIVE CENTER, NATIONAL MUSEUM OF AMERICAN HISTORY, S.I.

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LETTERS

Readers respond to the February issue:

WHO KNEW?

PAUL RAFFAELE'S article "Uganda: The Horror" has done readers a great service by opening our eyes to the atrocities there. As I read the article, I cried for these children. The photographs convey a sense of hope for Uganda and allow us to see the personal stories of triumph and despair.

ANNWYN MILNES
ALEXANDRIA, VIRGINIA

YOUR ARTICLE struck a deep chord in me. As a high-school student, I take for granted that I am able to go to school without fearing for my life. Reading about young Ugandans making nightly treks to safety took me aback. In this nation, fluctuating fashions, cellphone dilemmas and high-school romances are often the extent of many teenagers' concerns, so a place where kids are fighting to survive, much less learn, seems incomprehensible. The empty stares and fearful footsteps of the Ugandans in the photographs spoke powerfully of the grief and terror that pervade their daily existence. The article reminded me of the precariousness of the "essentials" of my own life, and all of the blessings that I, as an American teenager, possess.

KELSEY ZOTTNICK
GAINESVILLE, GEORGIA

GO SNAKEHEADS!

AS HELEN FIELDS pointed out in "Invasion of the Snakeheads," the introduction of new species into the Potomac River watershed is not new. In addition to largemouth bass, channel catfish, blue catfish, Asian carp and rainbow trout, the list of nonindigenous species also includes walleye, muskellunge, brown trout, grass carp, northern pike, rock bass, white crappie, flathead catfish, koi and who knows how many aquarium pets released by their owners. The present-day Potomac is far different from its pre-colonial state. Now to this mix comes the

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LETTERS

snakehead, a game fish that willingly takes artificial lures, fights like crazy, grows to trophy size, and tastes great. And the downside?

MAX ELIAS
WASHINGTON, D.C.

MESMERIZING HISTORY

PAMELA CONSTABLE'S "Assignment Afghanistan" made me feel that I was right alongside her as she made her numerous journeys to this area. I was mesmerized by the history, the people and the hardships she conveyed. The description of the families heading home on their trek through the Hindu Kush mountains was heart-wrenching. I now feel I have a much better understanding of the enormous effort needed to rebuild this country.

KATHRYN PHERSON
SANFORD, FLORIDA

GATES CRASHER

AS A NEW YORKER who regularly uses Central Park, I anticipated with some concern Christo and Jeanne-Claude's installation of *The Gates* ("Christo Does Central Park"). The day after the piece opened, I visited the park. I can relate that *The Gates* has all the charm of my neighbor's shower curtains hanging on a clothesline, and has brought the color of construction site safety netting to the park's winter scene.

ARTHUR TENENHOLTZ
NEW YORK, NEW YORK

PIED PIPER

MY FAMILY VISITED Pie Town, New Mexico, in 1995, hungry for pies ("Savoring Pie Town"). To our dismay, there were none. "It's just wrong," grumbled my mother, Mary Munden, so we purchased the old Thunderbird Trading Post on Highway 60. With rolling pin in hand, my mother put the pie back into Pie Town. Using her mother's recipes, she proved that "if you bake it, they will come." My entire family has contributed to the success of our restaurant, the Pie-O-Neer, going on its tenth year. We feel honored to be in this special place that photographer Russell Lee captured so well during the Depression.

KATHY KNAPP
PIE TOWN, NEW MEXICO

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Acrylic resin Magna..... C-10

Oil and charcoal..... B-2

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Tumbleweeds and dust, nowhere in sight..... E-20

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April 1970

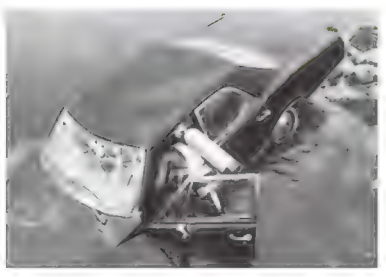
THE YEAR WE WERE BORN

A LOOK BACK AT THE WORLD IN *SMITHSONIAN* MAGAZINE'S FIRST YEAR

CELEBRATING 35 YEARS SMITHSONIAN MAGAZINE

The first Earth Day, held April 22, promoted awareness about the deterioration of the environment. Two thousand events involving 20 million Americans took place across the country. Denis Hayes, organizer of the day, recalls the sea of people on Manhattan's Sixth Avenue: "I knew then we had tapped into something enormously important."

IN THE NEWS



On April 7, a grand jury in Edgartown, Massachusetts, chooses not to indict Senator Edward Kennedy in the death of Mary Jo Kopechne, who drowned when Kennedy's car plunged into a tidal pool on Chappaquiddick Island in July 1969. James Boyle, the judge at a January inquest, issues a statement April 29 asserting the senator may have driven negligently and contributed to Kopechne's death.

President Nixon announces April 30 that he sent American troops into Cambodia to support South Vietnamese Army efforts to destroy Communist hide-outs there. Protests immediately erupt on college campuses throughout the country. The U.S. pulls out of Vietnam in March 1973. Nixon dies in April 1994 at age 81.

THE LIST

Top 10 Songs of April 1970

1. **ABC** The Jackson 5
2. **Let It Be** The Beatles
3. **Spirit in the Sky** Norman Greenbaum
4. **Instant Karma** John Lennon
5. **American Woman/No Sugar Tonight** Guess Who
6. **Love Grows (Where My Rosemary Goes)** Edison Lighthouse
7. **Come and Get It** Badfinger
8. **Love or Let Me Be Lonely** Friends of Distinction
9. **Bridge Over Troubled Water** Simon & Garfunkel
10. **Turn Back the Hands of Time** Tyrone Davis

COMINGS & GOINGS

DIED:
Gypsy Rose Lee, 56, Striptease artist, April 26

BORN:
Uma Thurman
Actress, April 29

BORN:
Andre Agassi
Tennis player, April 29

BORN:
Smithsonian magazine
Volume 1, Number 1

WHERE ARE THEY NOW?

President Richard Nixon awards the Apollo 13 astronauts (from left, Fred Haise, Jim Lovell, Nixon and John Swigert) the Congressional Space Medal of Honor April 19.

JIM LOVELL

APOLLO 13 ASTRONAUT

JIM LOVELL, commander of Apollo 13, uttered the chilling phrase "Houston, we've had a problem" after an oxygen tank in the spacecraft's service module exploded. The crew (Lovell plus command module pilot John Swigert and lunar module pilot Fred Haise) had to abort the Moon mission and return to Earth. After three days in which the world held its collective breath, they landed April 17.

"It was a lesson in crisis management," says Lovell today. "We had to use teamwork, initiative and imagination to get home." Although Lovell says he was disappointed not to reach the Moon, over the years "it dawned on me that turning a catastrophe into a recovery was a triumph of another manner."

Lovell, 77, is president of Lovell Communications in Lake Forest, Illinois, which disseminates information about the U.S. Space Program. With his son Jay, he also owns Lovells of Lake Forest, a restaurant featuring space artifacts as decoration.

—*MIMI KIRK*

"I've been brought up to believe that when something is right, you have to do it, no matter what the consequences. Whether one wins or not is a very secondary matter; to the extent that I fight, it will be easier for the next person."

—INDIAN PRIME MINISTER INDIRA GANDHI commenting on her plan to bring democratic socialism to India, as reported in the April 26 *New York Times*

LEFT TOP TO BOTTOM: DENNIS STOCK / MAGNUM PHOTOS; BETTMANN / CORBIS; UPI / CORBIS; GEORGE SKADDING / TIME LIFE PICTURES / GETTY IMAGES; LIONEL CIRONNEAU / AP / WIDE WORLD PHOTOS; RICK STEVENS / AP / WIDE WORLD PHOTOS; SMITHSONIAN (APRIL 1970); BETTMANN / CORBIS; RIGHT: WHITE HOUSE PHOTO OFFICE COLLECTION / NATIONAL ARCHIVES; KEPPLER SPEAKERS

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The Old Ballgames

Civil rights chronicler Ernest Withers also photographed the glories of black baseball, including pioneering big leaguer Jackie Robinson ~ BY CAROLYN KLEINER BUTLER

FOR THE BLACK COMMUNITY IN MEMPHIS, the return of spring meant the return of baseball at Martin's Stadium, home of the Red Sox from 1923 to 1960. "Ah, man, lotta people and pretty girls," blues legend B.B. King once said of the ballpark, where he used to perform before games.

The photographer Ernest Withers, a North Memphis native who would document the civil rights movement for African-American newspapers and the mainstream press, made countless pictures in the 1940s and '50s of the Sox and their fans: white-gloved women with perfectly coiffed hair and pearls; dapper men in suits and fedoras; smiling kids on the lookout for their favorite athletes. "This was back when

ERNEST C. WITHERS / PANOPTICON GALLERY, WALTHAM, MASSACHUSETTS

Withers remembers Robinson (far right, with Ernie Banks, seated, Larry Doby and promoter Matty Brescia c. 1949) as a "decent man."

"Ah, man, lotta people and pretty girls," B.B. King once said.

Negro Baseball was Negro Baseball," Withers says. "Those games were the place to be." His book of photographs, *Negro League Baseball*, has just been published by Harry N. Abrams.

Born in 1922, Withers became interested in photography in high school. He enlisted in 1943, trained at the Army School of Photography and was shipped to the South Pacific, where he helped build roads and bridges, and took pictures of fellow soldiers. When the war ended, Withers returned to his hometown as a commercial photographer covering what he calls "the black side of life" at weddings, funerals, parties and concerts.

Withers says he felt compelled "to record what was going on" (Martin Luther King Jr. in Memphis, 1966).

"My interest was sending my seven boys and one girl to college, which I did, and I appreciate my pictures for that," he says in his homey Beale Street office, which is practically overrun with photographs, negatives, old newspaper clippings and equipment. "It was the time, and I was just recording the time. It was my job." Still is. At 83, Withers photographs press conferences, church socials and the like for the daily *Commercial Appeal* and other publications.

Baseball was among his earliest subjects. He showed up at Martin's Stadium for games and, with his twin-lens Rolleiflex camera, took pictures of home-team players like the great southpaw Verdell Mathis, not to mention visiting stars such as Satchel Paige and Ted "Double Duty" Radcliffe, who hurled fastballs one day and caught them the next. Withers developed the negatives and prints at home, washing them in the bathtub and drying them in the oven. Occasionally he sold the photographs at the ballpark for $1 apiece. He also produced 8 x 10 glossies of the athletes for the four Martin Brothers, wealthy blacks (two physicians, a dentist and a pharmacist) who owned the Red Sox and the stadium.

Black-only baseball squads had existed since before the Civil War, but there was no organized competition until former pitcher Rube Foster helped form the Negro National League in 1920, which was relaunched in 1933 and joined by the Negro American League in 1937. Clubs such as the Birmingham Black Barons, Indianapolis Clowns and New York Cubans often held games at off times in Major League stadiums or barnstormed across the country to challenge community teams. By the mid-1940s, black baseball was pulling in more than $2 million a year.

Then, on April 15, 1947, former UCLA track and football star Jackie Robinson, who had played one season with the Negro American League's Kansas City Monarchs, suited up for the Brooklyn Dodgers, integrating Major League Baseball. Others followed, and over the next 12 seasons African-Americans—including Robinson, Roy Campanella, Willie Mays and Hank Aaron—won nine Rookie of the Year and nine Most Valuable Player awards. "These guys had been playing ball all their lives—they were older than typical rookies, they knew the game—and what they had to adjust to was off the field, for the most part," says Raymond Doswell, curator of the Negro Leagues Baseball Museum in Kansas City, Missouri.

In the late 1940s, Withers photographed the National League's Robinson and Larry Doby—the first black player in the American League, with the Cleveland Indians—at Martin's Stadium during an exhibition game. Ernie Banks, then of the Monarchs but soon to be a Chicago Cub, sits off to the side. The picture represents one of the last great moments of the Negro League, before black clubs lost so much talent to the Majors that they had to fold.

Withers' rise to prominence began with a self-published pamphlet documenting the sensational 1955 trial of the accused murderers of Emmett Till, an African-American teenager killed for whistling at a white woman. Withers recorded the integration of Ole Miss in 1962 and the funeral of Martin Luther King Jr. in 1968. He captured the blues movement springing up on Beale Street, photographing B.B. King, Elvis Presley, Tina Turner and others. "The same quality that makes his baseball pictures important also makes his civil rights and other pictures important—the quality of the insider view," says F. Jack Hurley, author of *Portrait of a Decade: Roy Stryker and the Development of Documentary Photography in the Thirties*. "His images achieved an intimacy, a level of comfort, that no one else could have reached."

Withers says his work was about getting close to people—literally. "I've never been a super telephoto photographer," he said. "I'm not wrapped up in technology. I'm a photographer that gets in and moves up on the image."

CAROLYN KLEINER BUTLER writes regularly for U.S. News & World Report.

ERNEST C. WITHERS / PANOPTICON GALLERY; PENNY WOLF / WITHERS PHOTOGRAPHY

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Swords and Sandals

In Libya, again open to U.S. travelers after more than two decades, archaeologists have uncovered spectacular mosaics of the glories of Rome ~ BY VIVIENNE WALT

HELMUT ZIEGERT returned to the coast of Libya last year to follow up on a tantalizing discovery. In September 2000, his colleague Marliese Wendowski was excavating what she thought was a large farmhouse when, 12 feet deep in the sandy soil, she came across a floor covered with a stunning glass-and-stone mosaic of an exhausted gladiator staring at a slain opponent. The discovery had come too late in that year's expedition to pursue further, so the University of Hamburg archaeologists reburied the mosaic. "It was well preserved," Ziegert says. "I knew there had to be a lot more."

When Ziegert and his co-workers finally returned to the site—near the town of Homs, which is adjacent to the ancient Roman settlement of Leptis Magna—they found, mixed in with the ruins of a modest farmhouse, those of a stately villa that housed gladiators, ancient Rome's superstar athletes. The mosaics decorated the floor of an elaborate cold-water bathhouse and consisted of tiny pieces of green, brown and gold glass and stone laid in a thin layer of chalk atop about five inches of concrete. Ziegert, who has conducted digs all across northern Africa, was stunned by the works' size: five huge panels that stretched 30 feet. Luisa Musso, a specialist in mosaics and Roman archaeology at the University of Rome Three, says, "I've seen mosaics all over this area, and these are extraordinary."

The scenes captured the gore of the Roman amphitheater that stood nearby. In the panel Ziegert's team uncovered first, the slain gladiator's head tilts backward nearly out of the frame, in a technique more common to paintings than mosaics. In the other panels, four young men wrestle a wild bull to the ground with their bare hands, a warrior does lone battle against a long-antlered deer, and a gladiator wearing intricately patterned trousers hoists his shield over a stricken foe. Some antiquities specialists say the painterly touches indicate that a Roman artist probably created the mosaics. But other experts resent the implication that an African couldn't produce such sophisticated work. "It looks like the artist might have been trained at one of the local schools in North Africa," says Hafed Walda, a Libyan archaeologist based at the University of London's King's College.

The mosaic is a window onto a thriving Roman city at the height of the empire's hold on North Africa. Set in a natural harbor on Libya's North African coast, Leptis Magna was founded some 3,000 years ago by Phoenicians as a commercial trading post for the Mediterranean region. After centuries of political turmoil, the area joined the Roman Empire around 25 B.C. Walls and gates were built around the city later, but residents retained the right to own their land and control local affairs. Leptis Magna's traders did well under Roman rule, but after the empire collapsed, in the fifth century A.D., the city's prestige and population waned. The town disappeared completely in the 11th century. Today, the ancient settlement is

Archaeologists have rushed to preserve 2,000-year-old mosaics from a gladiators' villa near Leptis Magna (above), an ancient city in what is now Libya. The intricate panels were under 12 feet of soil.

LYNSEY ADDARIO / CORBIS; STAN FELLOWS

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Hundreds of Americans have traveled to Libya on package tours to visit ruins.

After years of sanctions against Libya, some archaeological sites are in disarray.
Scholars have moved murals (a gladiator at rest, above), angering conservationists.

nestled next to Homs, a bustling modern town that caters largely to archaeological missions and a growing number of foreign tourists.

Like many of Leptis Magna's original buildings, the villa that Ziegert has been uncovering was buried over time by the slow shifting of nearby hills. Musso guesses that the villa's owner was a prosperous local trader. Given the mosaic's artistry, she says, the trader would have had immense wealth. "Everyone who stepped into the villa would know immediately how rich he was."

Last June, Ziegert hired Libyan workers to lift the panels out of the ground, haul them more than a mile and cement them to the walls of the small Leptis Magna Mosaic Museum financed by Italian officials. The removal incensed some archaeologists, who claim that the mosaics were irreparably damaged. "The beautiful Roman artwork remained well preserved under the sand for almost 2,000 years, only to be hastily and clumsily unearthed," Giuma Anag, a technical adviser to Libya's Department of Archaeology, bemoans in an e-mail. "It will take a good restorer several years and a lot of money to rid the mosaic of its current steel-and-concrete base." Musso and others believe that instead of relocating antiquities, officials should arrange for security guards to watch over intact archaeological sites. "It's always better to leave something where it is," Musso says. "But one of the issues is that there is a great difficulty in finding money to preserve them on the spot."

Ziegert dismisses the concerns, saying that the mosaics were damaged centuries before during an earthquake around A.D. 200. Abdallah Elmahmudi, the scientific research director for Libya's Department of Archaeology, also denies the archaeologists harmed the artifact. "It was excavated according to scientific theories," he says. "The people are very good workers and used the materials that we have in the department."

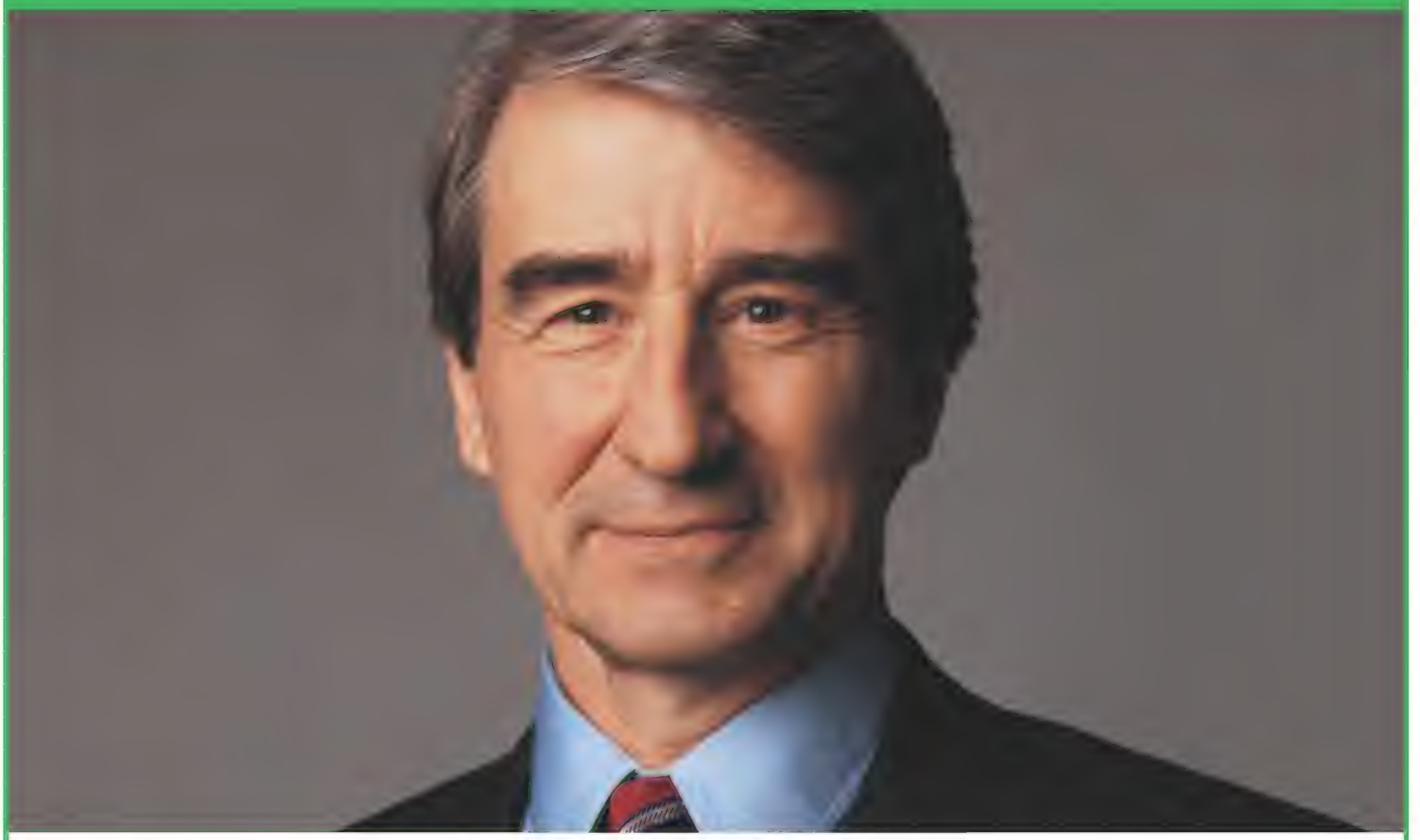
The dispute highlights new pressures on Libya, which is promoting its archaeological ruins as a tourist attraction after decades as an international pariah. In February 2004, President Bush lifted the 23-year-old ban on U.S. citizens traveling to Libya; in September, air travel between the two nations resumed. The move came after Libya agreed to dismantle its nuclear weapons facilities and compensate the families of people killed in the 1988 bombing of a New York City-bound Pan Am airliner over Lockerbie, Scotland; 270 people, including 189 Americans, died in the terrorist act, committed by a Libyan intelligence officer now jailed in Scotland. The United States still limits exports to Libya, and the nation remains on the State Department's list of terror sponsors along with countries such as Iran, Syria and Cuba.

Still, hundreds of Americans have recently traveled to Libya on package tours to visit the ruins of Leptis Magna, Sabratha and Cyrene. Among the best-preserved ancient Roman and Greek towns on the Mediterranean, the sites nonetheless show signs of neglect. "They're fantastic, but they look like they have been put in the hands of caretakers who don't give a damn," says Wisconsin travel consultant Rex Fritschi. Standing in the lobby of a Tripoli hotel last October, he said his group had found garbage strewn at some sites and no working toilets at others. Government officials and archaeologists say they need more funds not only for excavating but also administering archaeological sites.

If the gladiator mosaics are any indication, Libya's potential as a window into the Roman Empire's past has only just begun to be tapped: less than a third of Leptis Magna, a 1,500-acre site, has been excavated. As archaeologists continue to work, visitors to the little museum can contemplate the Roman equivalent of an action movie. The mosaics, Musso says, "are so full of passion and drama, it's like watching a film. They are really cinematic."

VIVIENNE WALT, who has worked as a reporter for Time *magazine, is based in Paris.*

LYNSEY ADDARIO / CORBIS



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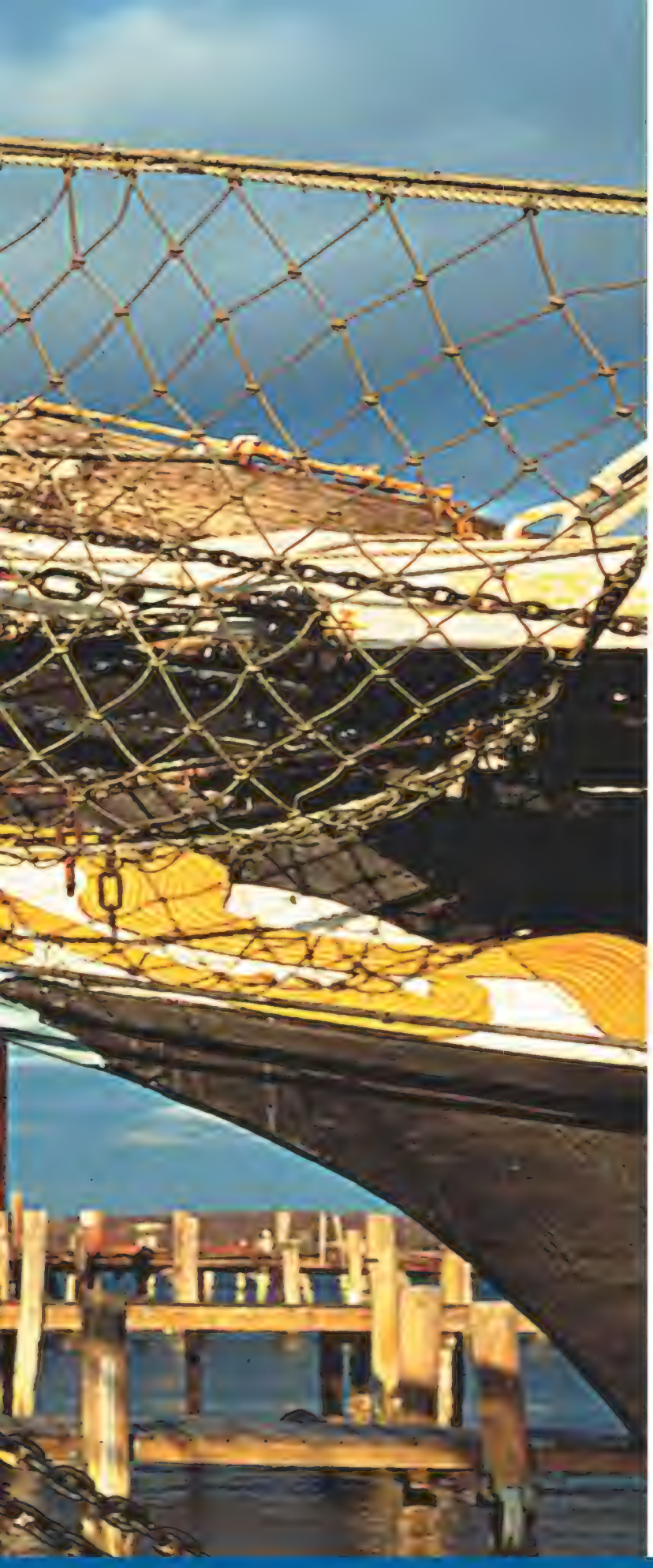

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Hearing Aid

A trove of recorded sounds preserves everything from tree frog calls to murmurs of the heart ~ BY OWEN EDWARDS

WHEN I FIRST MOVED to New York City in the 1960s, I rented an apartment at 72 Jane Street in Greenwich Village. With its ornate marble fireplace, tall windows and small, quiet garden, it seemed more 19th century than 20th. Jane Street happened to be on the route taken by New York City's mounted police as they finished their shifts and headed back to the downtown stables. So every evening, as I sat at my desk, I would hear the comforting rhythm of half a dozen horses clip-clopping along the cobblestone street. Hearing those hoofbeats night after night contributed to the powerful romantic connection I felt for the city in those days.

Much of the richness of life is absorbed through the ear. And much of the clash and chaos too. From a mother's lullaby to the drumroll of thunder from an approaching storm to the cacophony of car horns in a traffic jam, the sounds of our lives help define our lives. In a sense—specifically, the second sense—we are what we hear, and at least part of the sum of ourselves resides in the recollections of the summer hum of cicadas or the distant lament of a train whistle at midnight.

Like the remembered perfume of spring lilacs or the rich aroma of a brand-new Buick (that four-hole Roadmaster with red leather seats), certain sounds remain in the mind's ear for years, waiting to be called to the surface. The mimicry of a mockingbird transports my wife to Germany's Black Forest, where she grew up amid coloratura songbirds. But sounds once taken for granted can also fade away, never to be heard again.

[*Reel-to-reel tape recorder, c. 1999*
SMITHSONIAN FOLKWAYS RECORDINGS]

TOM WOLFF

Children may still call their toy trains "choo-choos," but few of them have ever heard the percussive snorts of a real steam locomotive. (And a whole generation of newspaper reporters have no memory of the collective clatter of typewriters, or the bells that signaled the end of a line of copy.)

Sounds once such an essential part of life—the ring of a pre-digital telephone—are disappearing. But unlike spotted owls and snail darters, endangered sounds have few advocates. "Most sound technology today is designed for dissemination, not preservation," says one of them, Daniel Sheehy, director and curator of Smithsonian Folkways Recordings, a collection not only of tens of thousands of musical examples from around the world but also of such auditory arcana as calliopes, insect sounds and the thrum of a human heart. The trove that Sheehy manages is built on the protean work of Moses Asch, an audio engineer and unrivaled collector of life's vast hearsay evidence. Asch, who founded Folkways in 1948, was among the first to record such legendary folk music figures as Woody Guthrie and Pete Seeger, but he also had an omnivorous ear and seemed determined to preserve, as he put it, "anything that is sound."

Asch died in 1986, not long after donating his voluminous collection to the Smithsonian. (Curator Sheehy has said that if he did nothing but listen to recordings 40 hours a week, it would take him two years to hear its entirety.) The collection came with Asch's stipulation that everything in it would remain in circulation and be available for purchase. This year, the label was nominated for five Grammys. (A compilation of kids' songs, "c-ELLA-bration," a tribute to folk singer Ella Jenkins, won for best children's album.)

But it is life's ambient background music that fascinates the true sonophile. "You never know when a sound will become history," says Sheehy. "That's why preservation is so important. Imagine if we could have recorded the sounds of Rome from 2,000 years ago." There are larger collections of odds-and-ends sound in Hollywood, ready to supply authentic backgrounds for period films. But at Folkways, says Sheehy, "we're thinking of 500 years from now."

And the beat goes on. Steven Feld, an anthropologist from the University of New Mexico, rigged up a hat with four microphones, one facing in each direction. He used this odd chapeau to record church bells as he walked through Macedonia during winter festivals, and the resulting disc now sells some 500 copies a year.

Since the sounds of ancient Rome are no longer available to us (unless you trust the soundtrack of *Spartacus*), what should be recorded today? The answer, says Sheehy, is pretty much everything. "If I were to go out with recording equipment," he says, "I'd want to hear all the ordinary sounds of ordinary life as we live it now—people talking as they walk down the street or order lunch in a restaurant."

Sheehy, who is restoring a classic 1968 Mustang, would even like to record the sounds of American muscle cars, which is fine with me. On a turntable behind my desk is a record album called "The Sounds of Sebring," bought for me when I was a teenager in the 1950s by my sports-car-loving father. I used to listen to the distinctive notes of Porsches, Jaguars, Alfa Romeos and Ferraris over and over, the way my friends listened to Elvis and Bill Haley and Fats Domino. And today, half a century later, I still spend my happiest hours going round and round on racetracks on a well-tuned sport motorcycle. Sounds like cause and effect, does it not? Vroom.

"Imagine if we could have recorded the sounds of Rome from 2,000 years ago."

"You never know when a sound will become history," says Sheehy. (Smithsonian folklorist Ralph Rinzler records a Nashville musician, known as Paper Boy, in 1964.)

OWEN EDWARDS is a freelance writer who is based in San Francisco, California.

R. TELLIN / CENTER FOR FOLKLIFE PROGRAMS & CULTURAL STUDIES, S.I

FACES OF THE FALLEN

Each portrait "is about love and loss, generosity and patriotism," says Washington, D.C.-area portrait artist Annette Polan. Last May, Polan began enlisting some 200 artists to create 1,314 portraits of American servicemen and servicewomen killed in Afghanistan or Iraq between October 2001 and Veterans Day (November 11) 2004. The portraits, created from photographs, are on display through September 5 at the Women In Service For America Memorial at Arlington National Cemetery (www.facesofthefallen.org). The project, says Carole Bolsey, one of the artists, allows "me to reach those who place their lives in jeopardy and those who mourn the fallen." After the exhibition, the portraits will be given to the families of the dead. —*HELEN STARKWEATHER*

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"A Formidable Anamal"

After a winter of waiting, the corps leaves Fort Mandan and heads warily into bear country

Before breaking their winter camp to resume their journey up the Missouri River, Lewis and Clark pack their journals and various specimens—including antelope hides, rabbit skeletons, "four liveing Magpies" and one prairie dog—to send by barge to President Jefferson in Washington, D.C. by way of St. Louis. Soon, the remaining expedition members would encounter their first grizzly bears, which they would call "white" or "brown" bears, and which they had heard about from Mandan and Hidatsa Indians.

April 3, 1805 [Capt. William Clark]
We are all day ingaged packing up Sundery articles to be Sent to the President of the U.S.

April 7 [Capt. Meriwether Lewis]
Having on this day at 4 P.M. completed every arrangement necessary for our departure, we dismissed the barge and crew with orders to return without loss of time to S. Louis. . . . we were now about to penetrate a country at least two thousand miles in width, on which the foot of civillized man had never trodden; the good or evil it had in store for us was for experiment yet to determine.

April 11 [Clark]
Set out verry early I walked on Shore, Saw fresh bear tracks.

April 13 [Lewis]
We saw also many tracks of the white bear of enormous size, along the river shore and about the carcases of the Buffaloe, on which I presume they feed. we have not as yet seen one of these anamals, tho' their tracks are so abundant and recent. the men as well as ourselves are anxious to meet with some of these bear. the Indians give a very formidable account of the strengh and ferocity of this anamal, which they never dare to attack but in parties of six eight or ten persons; and are even then frequently defeated with the loss of one or more of their party. the savages attack this anamal with their bows and arrows and the indifferent guns with which the traders furnish them, with these they shoot with such uncertainty and at so short a distance, that they frequently mis their aim & fall a sacrefice to the bear. two Minetaries were killed during the last winter in an attack on a white bear. this anamall is said more frequently to attack a man on meeting with him, than to flee from him. When the Indians are about to go in quest of the white bear, previous to their departure, they paint themselves and perform all those supersticious rights commonly observed when they are about to make war uppon a neighbouring nation.

April 14 [Clark]
We Saw two white bear running from the report of Capt.

Miles - 224.

Monday April 29th. 1805.

Set out this morning at the usual hour; the wind was moderate; I walked on shore with one man. about 8 A.M. we fell in with two brown or White bear; both of which we wounded; one of them made his escape, the other after my firing on him pursued me seventy or eighty yards, but fortunately had been so badly wounded that he was unable to pursue so closely as to prevent me &

Meriwether Lewis: "The White bear have become so troublesome to us that I do not think it prudent to send one man alone on an errand of any kind."

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Lewis Shot, those animals assended those Steep hills with Supprising ease & verlocity. they were too far to discover their prosise Colour & Size.

April 17 [Lewis]
Tho' we continue to see many tracks of the bear we have seen but very few of them, and those are at a great distance generally runing from us; I thefore presume that they are extreemly wary and shy; the Indian account of them dose not corrispond with our experience so far.

April 18 [Clark]
Two men went up the river to Set their beaver traps they met with a Bear and being without their arms thought prodent to return &c.

April 29 [Lewis]
Set out this morning at the usual hour. . . . about 8 A.M. we fell in with two brown or [white] bear; both of which we wounded; one of them made his escape, the other after my firing on him pursued me seventy or eighty yards, but fortunately had been so badly wounded that he was unable to pursue so closely as to prevent my charging my gun; we again repeated our [fire] and killed him. . . . it's colour is yellowish brown. . . . this anamal appeared to me to differ from the black bear; it is a much more furious and formidable anamal, and will frequently pursue the hunter when wounded. it is asstonishing to see the wounds they will bear before they can be put to death.

April 30 [Clark]
I walked on Shore to day our interpreter & his Squar [Sacagawea] followed, in my walk the Squar found & brought me a bush Something like the Current, which She Said bore a delicious froot and that great quantites grew on the Rocky Mountains, this Srub was in bloom has a yellow flower with a deep Cup, the froot when ripe is yellow and hangs in bunches like Cheries, Some of those berries remained on the bushes.

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First-time actors (healer Honorato Ninantay in Peru) filled key roles.

CLAUDIO MIRANDA

A New Take on Native Traditions

Celebrated movie director Chris Eyre trains a lens on the lands and lives of contemporary Indians in *A Thousand Roads*, debuting this month at the National Museum of the American Indian

MAKING A MOVIE for a museum wasn't exactly what Chris Eyre had in mind. So Eyre, director of the acclaimed 1998 feature *Smoke Signals*, hesitated when the National Museum of the American Indian asked him to direct a film to run for years in its theater. Eyre, a Cheyenne-Arapaho, says he couldn't shake the image of something dryly instructional, like those videos about first aid he watched in grade school. But museum director W. Richard West Jr. insisted he wanted an Eyre movie—and that's what he got. After premièring at this year's Sundance Film Festival, *A Thousand Roads* begins daily public screenings at the museum April 10.

The 40-minute movie, shot in four locales last year for $3.2 million, ventures into the lives of four fictional characters. A Mohawk Indian woman trades stocks in Manhattan. A young Inupiat girl moves in with unknown relatives in Alaska when her mother faces military deployment overseas. A Navajo gangster swaps Albu-

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querque street life for "boot camp," as the narrator puts it, on the reservation. A Quechuan healer tests traditional medicine in a village tucked in the Andes of Peru. "You don't see the usual dance demonstrations or cultural demonstrations," says Joy Harjo, a Mvskoke (Creek) Indian who co-wrote the screenplay with producer Scott Garen. "What you see are people going about their human lives."

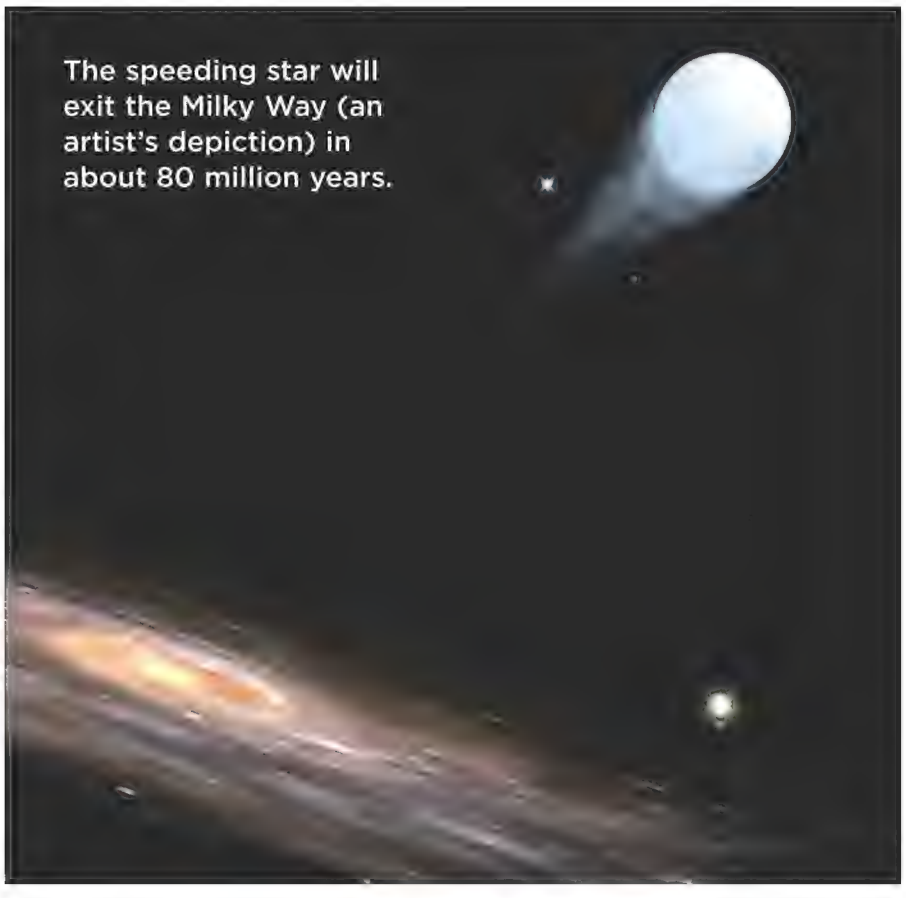
Professional Indian actors fill several key roles, but Indians cast on the spot fill many others. The stories unfold with scant dialogue and a smattering of unsubtitled dialects. And then there's the scenery—mountains, rivers, ice floes, mesas. "The land, for me, was a visual character," Eyre says. A self-described "fast" director, he admits he wasn't used to the luxury of waiting for choice natural light—clouds parting, sun hitting the horizon just so—before filming.

Eyre, 36, who grew up in Oregon and now lives in South Dakota near Rapid City, studied film at New York University. Through a mutual friend, he met the writer Sherman Alexie, a Spokane-Coeur d'Alene. The two adapted a book of Alexie's short stories into *Smoke Signals*, a comic, sometimes poignant portrait of reservation life and an unlikely pair's road trip. Awarded two prizes at Sundance, it's the first feature written, directed and acted by American Indians. "The film is so relaxed about its characters, so much at home in their world," critic Roger Ebert wrote in the *Chicago Sun-Times*, "that we sense it's an inside job." Since then, Eyre has directed three television movies and the 2002 feature *Skins,* a "wrenching, uncompromisingly bleak film," one *Los Angeles Times* critic wrote, about a reservation cop's struggles against crime fueled by alcoholism.

Native people "aren't all the same" says Eyre, a Cheyenne-Arapaho. "We don't all live in Hollywood's portrayals of us. We're progressive, and we're successful."

The museum's West, a Southern Cheyenne peace chief and an executive producer of *A Thousand Roads*, says he initially approached Eyre about two years ago because of the filmmaker's "immense capacity for drawing stories out of people." Eyre says he was sold on the project after reading the screenplay, which fit his low-key character-study style. "I never felt a period piece does Native people justice," he says. "This being a contemporary movie about trivial struggles and conflicts, laughter and humor, was for me what it's all about—a living history."

—ANNE BROACHE



The speeding star will exit the Milky Way (an artist's depiction) in about 80 million years.

CARLO ALLEGRI / GETTY IMAGES; RUTH BAZINET / HARVARD-SMITHSONIAN CENTER FOR ASTROPHYSICS

OUTTA HERE For the first time, astronomers have observed a star speeding out of the Milky Way heading for intergalactic space, never to return. Using the Smithsonian-University of Arizona 6.5-meter telescope atop Mount Hopkins near Tucson, scientists spotted the errant star traveling at the unusually fast 1.5 million miles or more per hour—twice the velocity necessary to escape the galaxy's gravitational clutches. Even so, it will take some 80 million years for the star to clear the edge of the Milky Way. "We didn't know what to make of it," says Warren Brown of the Smithsonian Astrophysical Observatory in Cambridge, Massachusetts. The observation appears to confirm a theory first proposed 17 years ago by Jack Hills of the Los Alamos National Laboratory. The theory would suggest that the speedster once orbited another star that was captured by a black hole, catapulting its companion across the galaxy. "That's what we think happened," says Brown, who co-authored a report on the finding last month in the *Astrophysical Journal Letters*. "It's like two twirling ice skaters. One falls down, and the other goes flying."

—BETH PY-LIEBERMAN

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The 45.52-carat blue jewel, says curator Jeff Post, has no cousins.

Hope Sleuth Cracks Case?

A computer-aided study shows that the world's largest dark blue diamond is one of a kind

HISTORIANS AND conspiracy theorists have long claimed that other diamonds were cut from the same stone as the Hope Diamond, says Jeff Post, the gems and minerals curator who oversees the 45.52-carat Hope, the world's largest dark blue diamond and the National Museum of Natural History's star attraction. But now computer technology has helped Post put such claims to rest.

The first recorded mention of the diamond that would become the Hope came more than 350 years ago, when Indian merchants sold a beautiful, rough-cut, 115-carat stone to a French entrepreneur, Jean Baptiste Tavernier. In 1668, Tavernier sold the stone to French king Louis XIV, whose jewelers cut it into a 67-carat gem; known as the French Blue, it became the centerpiece of France's crown jewels. In 1792, thieves stole the diamond. It eventually fell into the hands of London jewelers, who cut the stone into its present form. By 1839, British banker Henry Philip Hope had acquired the now 45.52-carat diamond, and it took his name. Since then, many have owned it, including Evalyn Walsh McLean of Washington, D.C., whose family owned the *Washington Post* and whose jewelry estate was purchased by the New York jewelers Harry Winston. The firm donated the Hope to the Smithsonian in 1958.

All in all, some 69 carats had been trimmed from the original stone to create the jewel. That has left open the possibility that other diamonds were cut from the castoff material. The State Hermitage Museum in St. Petersburg, Russia, has claimed that its 7.6-carat blue diamond, which once belonged to Empress Maria Feodorovna, was cleft from the same stone that gave rise to the Hope.

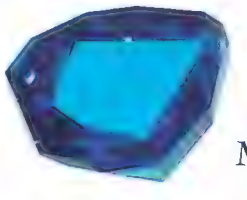
Post, who has doubted such claims, collaborated last year with gem cutter Scott Sucher and Stephen Attaway, a computer modeler for the Sandia National Laboratories in Albuquerque, New Mexico. From historical drawings of the Hope's ancestors—the Tavernier and French Blue—Attaway created 3-D computer models of each stone. Attaway's wife, Nancy, and Sucher used these models to carve facsimiles of the historic jewels out of cubic zirconia, then created plastic molds of each stone.

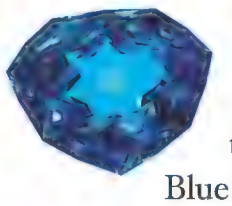
Post next placed the reproduction of the French Blue inside a plastic mold of the larger Tavernier. He filled the leftover spaces—simulating material that was cut—with hot, liquid wax and let it dry. He repeated the process with a facsimile of the Hope, placing it inside a mold of the French Blue.

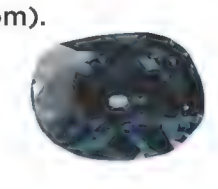
The bits of wax, Post found, are tiny. "There's not enough diamond material left in either case to make separate diamonds of more than a carat or two," he says. Also, crude cutting tools in use before the 20th century, he says, would have reduced the excess material to dust. "The science behind Post's approach is solid and systematic," says Tom Moses, vice president for research at the Gemological Institute of America.

Post, who plans to publish the results later this year, holds the French Blue facsimile up to the light. "What a pity those thieves cut it," he says. "It is really a much prettier stone than the Hope."

—*JOHN F. ROSS*







GEMSTONE GENEALOGY The 115-carat stone that a French king bought in 1668 (top, a facsimile, shown at roughly two-thirds size) yielded the 67-carat French Blue (middle), which begat the Hope Diamond (bottom). What became of the missing carats? New research rules out other sizable stones.

ERIKA LARSEN / REDUX PICTURES; CARL C. HANSEN / SMITHSONIAN INSTITUTION (3)

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APRIL 30, 2005

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Missouri Valley
Historical Squirrel Cage Jail
Council Bluffs
Iowa Aviation Museum
Greenfield
James and Meryl Hearst Center for the Arts
Cedar Falls
Lakes Art Center
Okoboji
Laura Ingalls Wilder Museum
Burr Oak
Marion Heritage Center
Marion
Montgomery County History Center
Field Oak
Muscatine Art Center
Muscatine
Museum of Religious Arts
Logan
National Czech & Slovak Museum & Library
Cedar Rapids
Phelps House
Phelps
Prairie Trails Museum of Wayne County
Corydon
Putnam Museum and IMAX Theater
Davenport
Salisbury House
Des Moines
Sioux City Art Center
Sioux City
Terrace Hill
Des Moines
The Danish Immigrant Museum
Elk Horn
The Iowa Children's Museum
Coralville
The Porter House Museum
Decorah
University of Iowa Athletics Hall of Fame
Iowa City
Vesterheim Norwegian-American Museum
Decorah
Worth County Historical Society Museum
Northwood

KANSAS

Morton County Historical Museum
Elkhart
Old Cowtown Museum
Wichita
Wichita Art Museum
Wichita

KENTUCKY

Kentucky Museum of Art and Craft
Louisville
Slugger Museum
Louisville
Shaker Village of Pleasant Hill
Harrodsburg
Speed Art Museum
Louisville

LOUISIANA

Audubon Aquarium of the Americas
New Orleans
Audubon Louisiana Nature Center
New Orleans
Audubon Zoo
New Orleans
Louisiana Children's Museum
New Orleans
Louisiana State Exhibit Museum
Shreveport
LSU Museum of Art
Baton Rouge
Ogden Museum of Southern Art
New Orleans
The National D-Day Museum
New Orleans

MAINE

Bowdoin College Museum of Art
Brunswick
Farnsworth Art Museum
Rockland
L.C. Bates Museum
Hinckley
Maine State Museum
Augusta
Portland Museum of Art
Portland

MARYLAND

Baltimore & Ohio Railroad Museum
Baltimore
College Park Aviation Museum
College Park
Historic St. Mary's City
St Mary's City
Maryland Science Center
Baltimore
Montgomery County Historical Society
Rockville
The Baltimore Museum of Art
Baltimore
The Dr. Samuel D. Harris Museum of Dentistry
Baltimore
The Ward Museum of Wildfowl Art
Salisbury
Walters Art Museum
Baltimore

MASSACHUSETTS

Bostonian Society and the Old State House Museum
Boston
Children's Museum in Easton
North Easton
Concord Museum
Concord
Davis Museum and Cultural Center
Wellesley
DeCordova Museum and Sculpture Park
Lincoln
Garden in the Woods of the New England Wild Flower
Framingham
Heritage Museums & Gardens
Sandwich
Historic New England
Boston
Isabella Stewart Gardner Museum
Boston
Louisa May Alcott's Orchard House
Concord
Lowell National Historical Park-Boott Cotton Mill
Lowell
Massachusetts Audobon Society: Arcadia Wildlife Sanctuary
Easthampton
Blue Hills Trailside Museum
Milton
Boston Nature Center
Mattapan
Broad Meadow Brook Wildlife Sanctuary
Worcester
Broadmoor Wildlife Sanctuary
Natick
Drumlin Farm Wildlife Sanctuary
Lincoln

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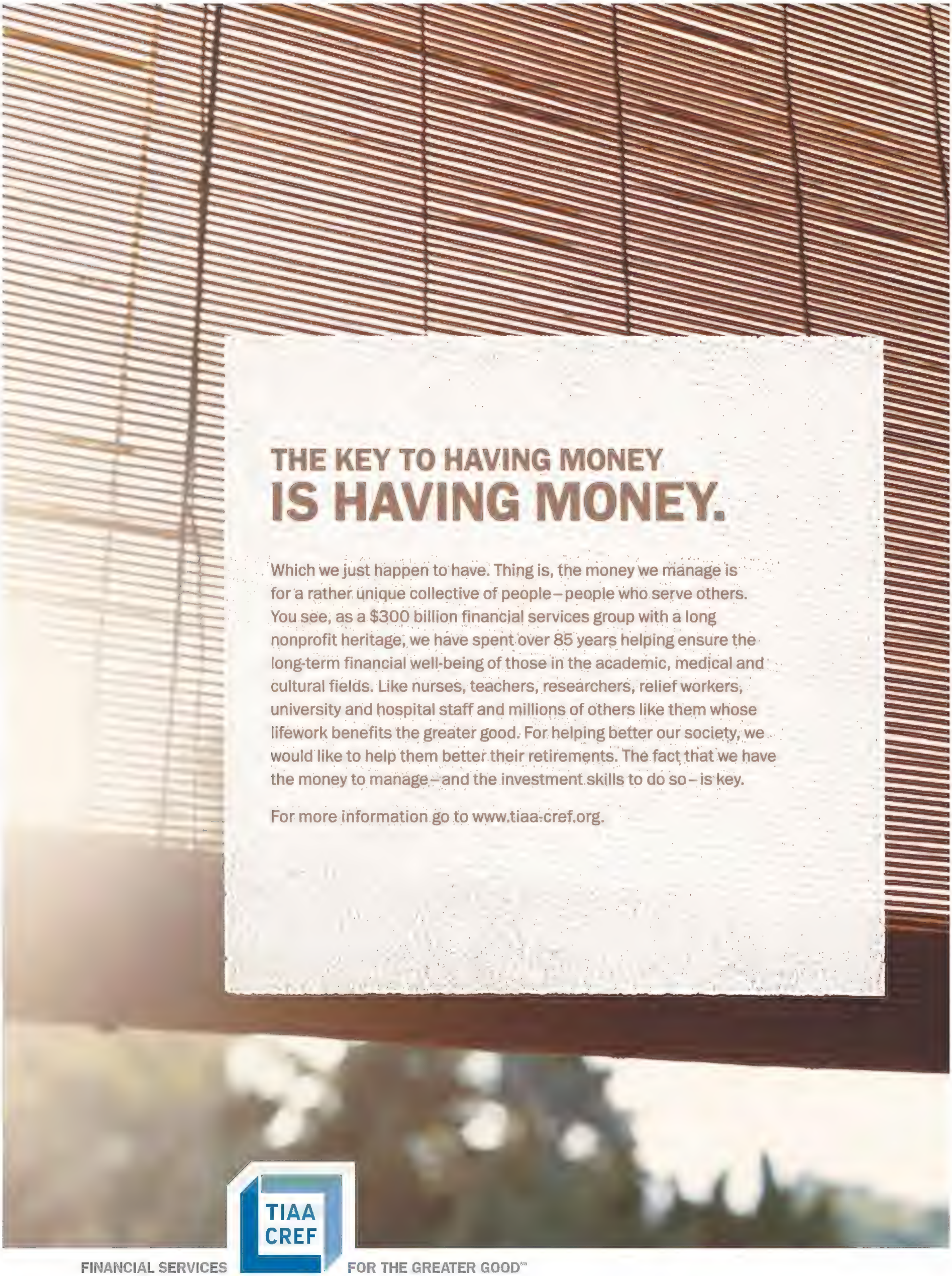

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SMITHSONIAN MAGAZINE'S

MUSEUM DAY

APRIL 30, 2005

Felix Neck Wildlife Sanctuary
Edgartown
Habitat Wildlife Sanctuary
Belmont
Ipswich River Wildlife Sanctuary
Topsfield
Joppa Flats Education Center
Newburyport
Moose Hill Wildlife Sanctuary
Sharon
North River/South Shore Wildlife Sanctuary
Marshfield
Oak Knoll Wildlife Sanctuary
Attleboro
Pleasant Valley Wildlife Sanctuary
Lenox
Stony Brook Wildlife Sanctuary
Norfolk
Visual Arts Center
Canton
Wachusett Meadow Wildlife Sanctuary
Princeton
Wellfleet Bay Wildlife Sanctuary
South Wellfleet
MIT Museum
Cambridge
Museum of Afro-American History
Boston
New Bedford Whaling Museum
New Bedford
Newton History Museum
Newton
Norman Rockwell Museum
Stockbridge
Old South Meeting House
Boston
Old Sturbridge Village
Sturbridge
Plimoth Plantation
Plymouth
Springfield Museums at the Quadrangle
Springfield
The Discovery Museums
Acton
Institute of Contemporary Art
Boston
The Mount, Edith Wharton's Estate and Gardens
Lenox
USS Constitution Museum
Boston
Worcester Art Museum
Worcester

MICHIGAN

Air Zoo
Portage
Cranbrook Art Museum
Bloomfield Hills
Cranbrook Institute of Science
Bloomfield Hills
Kalamazoo Valley Museum
Kalamazoo
Meadow Brook Hall
Rochester
Michigan State University Museum
East Lansing
The Detroit Institute of Arts
Detroit
University of Michigan Museum of Art
Ann Arbor
Ziibiwing Center
Mt. Pleasant

MINNESOTA

Goodhue County History Center
Red Wing
Minnesota History Center
St Paul
The Bakken
Minneapolis
The Minneapolis Institute of Arts
Minneapolis
Weisman Art Museum
Minneapolis

MISSISSIPPI

Lauren Rogers Museum of Art
Laurel
Ohr-O'Keefe Museum of Art
Biloxi
Old Capitol Museum of Mississippi History
Jackson
Oren Dunn City Museum
Tupelo

MISSOURI

Butterfly House
Chesterfield
Eugene Field House & St. Louis Toy Museum
St. Louis
Kemper Museum of Contemporary Art
Kansas City
Powers Museum
Carthage
Saint Louis Art Museum
St. Louis
St. Louis Science Center
St Louis
The Nelson-Atkins Museum of Art
Kansas City

MONTANA

Yellowstone Art Museum
Billings

NEBRASKA

Durham Western Heritage Museum
Omaha
Lester F. Larsen Tractor Test Power Museum
Lincoln

NEVADA

Atomic Testing Museum
Las Vegas
East Ely Railroad Depot Museum
Ely
Lost City Museum
Overton
Nevada Historical Society
Reno
Nevada State Museum
Carson City
Nevada State Museum & Historical Society
Las Vegas
Nevada State Railroad Museum
Carson City

NEW HAMPSHIRE

Currier Museum of Art
Manchester
Millyard Museum
Manchester
Museum of New Hampshire History
Concord

NEW JERSEY

Acorn Hall
Morristown
Montclair Art Museum
Montclair
The Newark Museum
Newark
The New Jersey Historical Society
Newark

NEW MEXICO

Millicent Rogers Museum
Taos
National Atomic Museum
Albuquerque
National Hispanic Cultural Center
Albuquerque
The Hubbard Museum of the American West
Ruidso Downs

NEW YORK

Albany Institute of History & Art
Albany
American Folk Art Museum
New York
Brooklyn Children's Museum
Brooklyn
Cathedral Church of St. John the Divine
New York
Children's Museum of the Arts
New York
Cold Spring Harbor Whaling Museum
Cold Spring Harbor
Everson Museum of Art
Syracuse
Fenimore Art Museum
Cooperstown
Fraunces Tavern Museum
New York
Gallery of Art & Science New York Academy of Sciences
New York
George Eastman House, International Museum of Photography and Film
Rochester
Heckscher Museum of Art
Huntington
Henry Street Settlement Abrons Art Center
New York
Historic Huguenot Street Huguenot Historical Society
New Paltz
Intrepid Sea, Air & Space Museum
New York
Jacques Marchais Museum of Tibetan Art
Staten Island
Japan Society
New York
King Manor Museum
Jamaica
Lower East Side Tenement Museum
New York
Memorial Art Gallery of the University of Rochester
Rochester
Milton J. Rubenstein Museum of Science & Technology
Syracuse
Museum of American Financial History
New York
Museum of Chinese in the Americas
New York
New York Museum of the City of New York
New York
Museum of the Earth
Ithaca
National Academy Museum
New York
National Museum of Racing & Hall of Fame
Saratoga Springs
New York State Museum
Albany
NYC Fire Museum
New York
NYC Police Museum
New York
Queens Botanical Garden
Flushing
Rubin Museum of Art
New York
Schenectady Museum & Suits-Bueche Planetarium
Schenectady
Seneca Falls Historical Society
Seneca Falls
Skyscraper Museum
New York
Smithsonian Museums:
Cooper-Hewitt National Design Museum*
Museum of the American Indian, George Gustav Heye Center*
South Street Seaport Museum
New York
St. Paul's Chapel
New York
Strong Museum
Rochester
The Bard Graduate Center
New York
The Center for Book Arts
New York
The Drawing Center
New York
The Weeksville Society
Brooklyn
USS Slater
Albany

NORTH CAROLINA

Appalachian Cultural Museum
Boone
Levine Museum of the New South
Charlotte
North Carolina Museum of History
Raleigh
The Charlotte Museum of History
Charlotte
The Mint Museums
Charlotte

NORTH DAKOTA

North Dakota Museum of Art
Grand Forks

OHIO

Cincinnati Art Museum
Cincinnati

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Cincinnati
Historic Sauder Village
Archbold
Oberlin Heritage Center/O.H.I.O.
Oberlin
Ohio Historical Society
Columbus
The Dayton Art Institute
Dayton
The Holden Arboretum
Kirtland
Wexner Center for the Arts, The Ohio State University
Columbus

OKLAHOMA

Gilcrease Museum
Tulsa
Oklahoma City National Memorial & Museum
Oklahoma City
Philbrook Museum of Art
Tulsa
Sam Noble Oklahoma Museum of Natural History
Norman
Sand Springs Cultural and Historical Museum
Sand Springs
Tulsa Air and Space Museum
Tulsa

OREGON

High Desert Museum
Bend
Jordan Schnitzer Museum of Art
Eugene
Oregon Historical Society
Portland
Portland Art Museum
Portland
The Science Factory Children's Museum & Planetarium
Eugene

PENNSYLVANIA

African American Museum in Philadelphia
Philadelphia
American Swedish Historical Museum
Philadelphia
Brendle Museum & Gemberling-Rex House
Schaefferstown
Carnegie Museum of Natural History
Pittsburgh
Erie Art Museum
Erie
Fort Hunter Mansion and Park
Harrisburg
Glencairn Museum
Bryn Athyn
Institute of Contemporary Art
Philadelphia
James A. Michener Art Museum
Doylestown
Mercer Museum
Doylestown
Palmer Museum of Art, The Pennsylvania State University
University Park
Phipps Conservatory and Botanical Gardens
Pittsburgh
Railroad Museum of Pennsylvania
Strassburg
The Franklin Institute
Philadelphia
The Schuylkill Center for Environmental Education
Philadelphia
University of Pennsylvania Museum of Archaeology and Anthropology
Philadelphia

RHODE ISLAND

Providence Children's Museum
Providence
The RISD Museum of Art
Providence

SOUTH CAROLINA

Columbia Museum of Art
Columbia
Historic Brattonsville, McConnells Historical Center of York County
York
Historical Center of York County
York
McCelvey Center
York
Museum of York County
Rock Hill

SOUTH DAKOTA

Museum of the South Dakota State Historical Society
Pierre

TENNESSEE

Birthplace of Country Music Alliance
Bristol
Frank H. McClung Museum, The University of Tennessee
Knoxville
Frist Center for the Visual Arts
Nashville
Historic Mansker's Station Frontier Life Center
Goodlettsville
Memphis Brooks Museum of Art
Memphis
Pink Palace Museum
Memphis
Rock 'N' Soul Museum of Memphis
Memphis
Stax Museum of American Soul Music
Memphis
Tennessee State Museum
Nashville
The Biblical Resource Center and Museum
Collierville

TEXAS

Blanton Museum of Art
Austin
Contemporary Arts Museum
Houston
El Paso Museum of Art
El Paso
Fort Concho National Historic Landmark
San Angelo
George Ranch Historical Park
Richmond
Houston Museum of Natural Science
Houston
John P. McGovern Museum of Health & Medical Science
Houston
Kimbell Art Museum
Forth Worth
Log Cabin Village
Fort Worth
Modern Art Museum of Fort Worth
Fort Worth
Nasher Sculpture Center
Dallas
Ocean Star Offshore Drilling Rig & Museum
Galveston
San Antonio Museum of Art
San Antonio
The Museum of Fine Arts
Houston
The Old Jail Art Center
Albany
The Science Place and TI Founders IMAX Theater in Fair Park
Dallas

SMITHSONIAN MAGAZINE'S

MUSEUM DAY

APRIL 30, 2005

The Women's Museum: An Institute for the Future
Dallas

UTAH

Utah Museum of Natural History
Salt Lake City

VERMONT

Billings Farm & Museum
Woodstock
Fairbanks Museum & Plantetarium
St Johnsbury
Hildene
Manchester

VIRGINIA

Chrysler Museum of Art
Norfolk
Edgar Allan Poe Museum
Richmond
Fields-Penn 1860 House Museum
Abingdon
Frontier Culture Museum
Taunton
John Q. Adams Center for the History of Otolaryngology
Alexandria
Maier Museum of Art, Randolph-Macon Woman's College
Lynchburg
Nauticus, The National Maritime Center
Norfolk
Shirley Plantation
Charles City
Stonewall Jackson House
Lexington
Thomas Jefferson's Poplar Forest
Forest
University of Richmond Museums
Richmond
Virginia Museum of Natural History
Martinsville
William King Regional Arts Center
Abingdon

WASHINGTON

Maryhill Museum of Art
Goldendale
Museum of Glass
Tacoma
Northwest Museum of Arts & Culture
Spokane
Polson Museum
Hoquiam
Seattle Art Museum
Seattle
Seattle Asian Art Museum
Seattle
Seattle's Museum of History and Industry (MOHAI)
Seattle
Tacoma Art Museum
Tacoma
The Museum of Flight
Seattle
Washington State History Museum
Tacoma

WASHINGTON, D.C.

American Red Cross Visitors Center
Corcoran Gallery of Art
DAR Museum (Daughters of the American Revolution)
National Archives

Smithsonian Museums:
Anacostia Museum and Center for African American History and Culture*
Freer Gallery of Art and Arthur M. Sackler Gallery*
Hirshhorn Museum and Sculpture Garden*
National Air and Space Museum*
National Air and Space Museum-Stephen F. Udvar-Hazy Center*, (Chantilly, VA)
National Museum of African Art*
National Museum of American History*
National Museum of Natural History*
National Postal Museum*
National Zoological Park*
Renwick Gallery of the Smithsonian Art Museum*
The Bead Museum
The Museums at the Pope John Paul II Cultural Center
The Textile Museum
United States Holocaust Memorial Museum
United States Navy Museum
Woodrow Wilson House

WEST VIRGINIA

Jenkins Plantation Museum
Green Bottom
West Virginia Independence Hall
Wheeling

WISCONSIN

Milwaukee Art Museum
Milwaukee
Milwaukee Public Museum
Milwaukee
New London Public Museum
New London
National Museum of Wildlife Art
Jackson Hole
Olbrich Botanical Gardens
Madison
Racine Art Museum
Racine
Racine Heritage Museum
Racine
Waukesha County Historical Society & Museum
Waukesha
Weis Earth Science Museum University of Wisconsin-Fox Va
Menasha
Wisconsin Maritime Museum
Manitowoc

WYOMING

Buffalo Bill Historical Center
Cody
Dubois Museum
Dubois
National Bighorn Sheep Interpretive Center
Dubois

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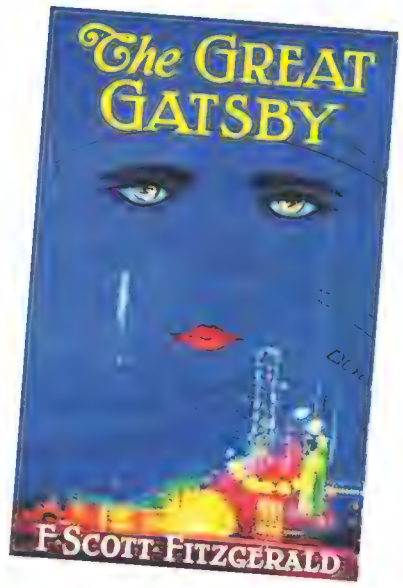
THIS MONTH IN HISTORY

APRIL ANNIVERSARIES—MOMENTOUS OR MERELY MEMORABLE

200 YEARS AGO: ANDERSEN, THAT'S ME!
Hans Christian Andersen is born in Odense, Denmark, on April 2, 1805. A poor cobbler's son, he listens often to folk tales told by local workhouse inmates. In 1827, he begins writing 212 tales of his own; his timeless characters, the Little Mermaid, Thumbelina, the Ugly Duckling, will entrance children for centuries in 145 different languages. Andersen dies in 1875, at age 70.

75 YEARS AGO: SWEET TREAT
While searching for off-season uses for his strawberry shortcake pans in 1930, Illinois baker Jimmy Dewar, 33, has the "best darn-tootin' idea" of his life: the Twinkie. Banana filling—changed to vanilla in a World War II banana shortage—instead of exterior icing makes the cakes easy to carry. By 2005, some 500 million Twinkies (150 calories each) find their way into American lunches annually.

70 YEARS AGO: IT'S OFF TO WORK WE GO
On April 8, 1935, Congress approves funding for the Works Progress Administration, a centerpiece of Franklin D. Roosevelt's New Deal. In its eight-year run, the WPA hires more than 8.5 million unemployed people to do publicly useful work, from bridge and road construction to concert performance (left), painting and writing. Management controversies and high employment rates during World War II bring the project to an end in 1943.



80 YEARS AGO: LOVE IN THE JAZZ AGE
F. Scott Fitzgerald, 29, publishes *The Great Gatsby*, a short novel about life among the elites and wannabes of Long Island society, in 1925. Reviews are mixed—"a glorified anecdote," writes H. L. Mencken, while the *New York Times* calls it "curious" and "mystical"—and sales disappoint. But the story of an American dream turned nightmare endures as a touchstone of an era, and by 2005 sells some 11 million copies in the United States. Fitzgerald dies at 44 in 1940.

ACROSS THE APRILS: WAR AND PEACE

April proves a cruel month indeed in the annals of American military history, beginning with a cry of warning from a silversmith on horseback. British troop movement toward the arsenal at Concord, Massachusetts, spurs Paul Revere, 40, north from Boston on April 18, 1775, to "alarm" the colonial militia. William Dawes and Samuel Prescott help spread the word, and the following day alerted Minutemen engage the British at Lexington and Concord in the American Revolution's opening salvo, a "shot heard round the world." Ninety years later, Confederate general Robert E. Lee surrenders his Army of Northern Virginia to Union general Ulysses Grant at Appomattox Court House, in Virginia, April 9, 1865. Their "gentlemen's agreement" allows Southern soldiers to return home and signals the coming end of America's bloodiest conflict. Eighty years after that, on April 30, 1945, German Führer Adolf Hitler shoots himself in his Berlin bunker as Allied troops approach in the final weeks of World War II in Europe. And though U.S. forces had withdrawn from Vietnam in 1973, Marine and Air Force helicopter airlifts, dubbed Operation Frequent Wind, rescue 7,000 American and Vietnamese civilians as Saigon's fall, April 29, 1975, brings the 20-year war to a close. The last helicopter departs Saigon the next day.

—ALISON McLEAN

FROM TOP LEFT: ARCHIVO ICONOGRÁFICO, S.A. / CORBIS; HOSTESS; SIMON & SCHUSTER, INC; D.R. FRITZPATRICK / GRANGER COLLECTION, NEW YORK; WPA POSTER COLLECTION / LIBRARY OF CONGRESS

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APRIL - AUGUST 2005

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For more information, visit www.culturespotter.com.

June 7 - Aug. 28

REMBRANDT'S LATE RELIGIOUS PORTRAITS AT THE J. PAUL GETTY MUSEUM
Los Angeles, CA, USA
www.getty.edu/museum

June 20 - Sept. 5

KNOKKE-HEIST INTERNATIONAL CARTOON FESTIVAL
Knokke Heist, Belgium
www.cartoonfestival.be/homeen.htm

June 23 - 27

SMITHSONIAN FOLKLIFE FESTIVAL
Washington, DC
www.folklife.si.edu

July 2 - Sept. 18

VAN GOGH: DRAUGHTSMAN AT THE VAN GOGH MUSEUM
Amsterdam, The Netherlands
www.vangoghmuseum.nl/bisrd/top-1-2.html

July 6 - 17

CALGARY STAMPEDE
Calgary, Alberta, Canada
http://calgarystampede.com

July 25 and Aug. 1

GUELAGUETZA
Oaxaca, Mexico
www.oaxacainfo.com/guelaguetza.htm

August 7 - 28

EDINBURGH FRINGE FESTIVAL
Edinburgh, Scotland
www.edfringe.com

August 21 - 29

NOTTING HILL CARNIVAL
London, England
www.rbkc.gov.uk/NottingHill04/general

FEATURED LISTING

April 1 - 8

TARTAN WEEK
April 1-8 is Tartan Week in NYC, a spirited celebration of all things Scottish. Enter to win a trip to Scotland. www.tartandayny.com

FESTIVALS IN SCOTLAND
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Scotland

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Smithsonian
APRIL 2005 VOLUME 36, NUMBER 1

EVOLUTION

EIGHTY YEARS AFTER A DAYTON, TENNESSEE, JURY FOUND JOHN SCOPES GUILTY OF TEACHING EVOLUTION, THE CITIZENS OF "MONKEYTOWN" STILL SAY DARWIN'S FOR THE BIRDS

BY STEVE KEMPER

IN THE SUMMER OF 1925, when William Jennings Bryan and Clarence Darrow clashed over the teaching of evolution in Dayton, Tennessee, the so-called Scopes trial was depicted in newspapers across the country as a titanic struggle. Bryan, a three-time presidential candidate and the silver-tongued champion of creationism, described the clash of views as "a duel to the death." Darrow, the deceptively folksy lawyer who defended labor unions and fought racial injustice, warned that nothing less than civilization itself was on trial. The site of their showdown, a drowsy hamlet tucked into the southeastern corner of the ruggedly beautiful Cumberland Plateau, was so obscure the *St. Louis Post-Dispatch* had to inquire, "Why Dayton, of all places?"

It's still a good question. Influenced in no small part by the popular play and movie *Inherit the Wind*, most people think Dayton ended up in the spotlight because a 24-year-old science teacher named John Scopes was hauled into court there by Bible-thumping fanatics for telling his high-school students that humans and primates shared a common ancestry. In fact, the trial took place in Dayton because of a stunt. Tennessee had recently passed a law that made teaching evolution illegal. After the American Civil Liberties Union (ACLU) announced it would defend anyone who challenged the statute, it occurred to several Dayton businessmen that finding a volunteer to take up the offer might be a good way to put their moribund little town on the map.

One morning in early May, the enterprising boosters interrupted a tennis game Scopes was playing behind the high school and invited him to join them at Robinson's Drug Store on Main Street. After treating him to a soft drink at the soda fountain, they asked the young teacher if he had ever used the state's standard biology textbook, which

The deceptively folksy Clarence Darrow (opposite) defended science teacher John Scopes (above, with his father).

ON TRIAL

contained a section on evolution. Scopes said yes. The men then told him what they were up to and wanted to know if he was willing to be arrested for teaching evolution. Although Scopes, a recent graduate of the University of Kentucky, certainly believed Darwin's theory, it's unclear whether he ever actually taught it in his classroom. Nevertheless, he amiably agreed to go along with the scheme and then returned to the tennis court. Neither he nor his fellow conspirators had any idea, of course, what an uproar their gambit would create, let alone how badly it would backfire, or with what long-lasting repercussions.

Today, 80 years later, the Scopes trial is still reverberating in the nation's consciousness. After President Bush was reelected last fall, commentators invoked it to help explain the cultural divide between blue and red, urban and exurban, secular and religious, scientific and evangelical. Many pointed to the seemingly decisive boost given to Bush by those who voted for him because of their conviction that he stood for moral values. Historian Garry Wills called the vote "Bryan's revenge for the Scopes trial." Implicit in more than a few election postmortems was the notion that Bryan's creationists had somehow contrived to come back from the dead. In truth, they have been here all along, living in places like Dayton.

Former presidential candidate and creationist William Jennings Bryan joined the Scopes prosecution team. On the stand, he asserted his faith in a literal Bible.

A century or so ago, Dayton was a prosperous farming and mining center with 2,000 people and a blast furnace. After the furnace closed in 1913, the community fell on hard times and since then has undergone many changes. The population is currently 6,180 and counting. The big employer these days is a La-Z-Boy plant; up-to-date emporiums like Blockbuster and Wal-Mart have arrived on the scene, and the long-dormant downtown area, dominated by the old courthouse square, shows signs of revitalization. But one thing about Dayton has not changed and probably never will: its bedrock fundamentalism. Even now, it's hard to find a teacher who goes along with Darwin. "We all basically believe in the God of creation," says the head of the high-school science department.

Many residents, however, do wince at the ridicule that comes with Dayton's place in history. H. L. Mencken, who coined the term "Bible Belt," covered the Scopes trial along with 200 other newspapermen. He called the locals "primates," not to mention yaps, yokels, morons and anthropoids. The mockery lingers still. "If something bad happens here to people from Memphis or Chattanooga," says lifelong resident Bobbie McKenzie, "they'll say, 'It's just a monkeytown anyway.' They associate Dayton with ignorance." Then she brightens up a bit. "Well, for us it's a blissful state. I'm so glad I was born here and raised my kids here."

Bobbie is sitting with her husband, James "Jimmy" McKenzie, Rhea County's family-court judge, in his office at the three-story brick courthouse where, right upstairs, his grandfather Ben, and uncle, Gordon, helped prosecute Scopes. "It gave Dayton a black eye," Judge McKenzie acknowledges, referring to the trial. But in spite of all the hoopla and history associated with it, he notes wryly, "the case didn't solve anything."

Bryan and the creationists claimed victory because the jury in Dayton upheld the state's ban against teaching evolution and, by implication, the right of parents to control what their children learned. Darrow and the evolutionists, on the other hand, believed that in exposing the ignorance behind creationism they had stymied its threat to academic freedom. Time has proved both sides wrong. "As a result of the Scopes trial, evolution largely disappeared in public school science classrooms," says historian Edward J. Larson, a professor at the University of Georgia and author of *Summer for the Gods*, a Pulitzer Prize-winning account of the trial and its aftermath. Larson acknowledges that there is "more mandated teaching of evolution now than ever before." But that doesn't translate into actual teaching. According to a recent report in the *New York Times*, many teachers simply ignore evolution or play it down to duck controversy.

The level of support among Americans for creationism—and for what is now called "intelligent design"—remains high. "Polls say it's stayed pretty stationary over time," says Larson. "About half answer with a creationist viewpoint." These true believers are continuing to press for curricular changes in schools across the country. As in the Scopes case, the new creationists tend to focus on textbooks. They've persuaded Alabama to place evolution disclaimers on its biology texts. Kansas removed evolution from its science standards in 1999; it was subsequently reinstated. Early last year, Georgia purged the word "evolution" from a proposed biology curriculum because, explained the state's superintendent of schools, Kathy Cox, it causes "a lot of negative reaction" by bringing up "that monkeys-to-man sort of thing."

STEVE KEMPER's book about the Segway, Code Name Ginger, *has been reissued as a paperback entitled* Reinventing the Wheel.

BETTMANN / CORBIS; P. 52 CORBIS; P. 53 BETTMANN / CORBIS

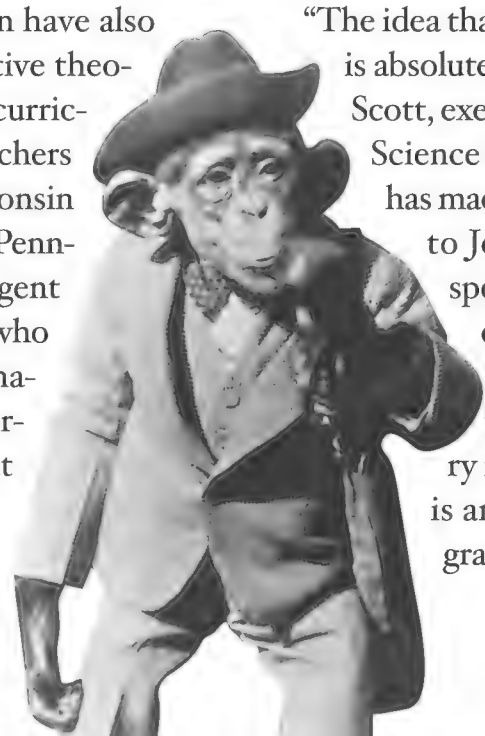
The Scopes trial had its roots in a ploy by local businessmen to raise the town's profile. The scheme succeeded, perhaps too well, as Dayton became forever known as "Monkeytown."

"IF SOMETHING HAPPENS HERE TO PEOPLE FROM MEMPHIS OR CHATTANOOGA," SAYS A RESIDENT, THEY'LL SAY, 'IT'S JUST A MONKEYTOWN ANYWAY.' "

The resulting furor forced Cox to back down. Since 2002, however, schools in Georgia's Cobb County have been putting stickers in its biology textbooks stating that "evolution is a theory, not a fact." The ACLU, riding to the defense of evolution once again, sued to have the stickers removed, and in January a judge agreed. The school board is appealing the ruling.

With help from their main think tank, the Discovery Institute in Seattle, advocates of intelligent design have also tried to persuade school boards to add "alternative theories" and criticisms of evolution to their science curricula. Three years ago, Ohio required its biology teachers to "critically analyze" evolution. Last year, a Wisconsin school board followed suit, and a school board in Pennsylvania voted to mandate the teaching of intelligent design. "These local revolts are started by people who are upset by what they consider to be the dogmatism of Darwin," says Phillip E. Johnson, an emeritus professor at the University of California at Berkeley's school of law.

An adviser to the Discovery Institute, Johnson ignited the intelligent-design movement with his influential 1991 book, *Darwin on Trial*. He's published a number of anti-evolution books and has been instrumental in reframing creationism as a "fairness" issue—as in, it's only fair to listen to both sides of an argument. "The Darwinists insist that only fully naturalistic explanations can be considered, regardless of the evidence," he says. "I would describe this as a faith in naturalism as a philosophy, rather than in science as an investigative process that considers all possibilities toward which the evidence may point."



"The idea that evolution is shaky or just a theory—this is absolutely amazing to scientists," says Eugenie C. Scott, executive director of the National Center for Science Education in Oakland, California. Scott has made a career out of playing Clarence Darrow to Johnson's William Jennings Bryan. She spearheads the defense of basic science education, including evolution, and has won many public service awards from scientific organizations. "On the street, a theory is just an opinion, but in science, a theory is an explanation," she says. "The theory of gravity is not an opinion or an observation, it

UNDERWOOD & UNDERWOOD / CORBIS; BRYAN COLLEGE

The trial "gave Dayton a black eye," says Judge McKenzie (in the historic courtroom), grandson of Scopes prosecutor Ben McKenzie. But, he insists, "the case didn't solve anything."

"DARROW AND OTHERS WOULD GO TO MY GRANDFATHER'S OFFICE AT THE END OF THE DAY AND TELL WAR STORIES. MY DADDY SAID IT WAS A SHOW."

explains why things fall. Creationists point to scientific arguments about how evolution takes place and the mechanisms of it, and then say evolution is controversial, so 'teach the controversy,' as if scientists are arguing about whether evolution is true. And that's just plain bad education."

In the aftermath of the November election, Scott anticipates many more challenges to the teaching of evolution. Religious conservatives "feel empowered now," she says. "For another four years, federal district court judges will be appointed, and conceivably one or more Supreme Court judges. Basically, it's court decisions that have kept creationism out of the classroom. But the law evolves too, and we can't stay confident the courts will continue to interpret the First Amendment as courts have in the past."

At Dayton's Rhea County High School, students do learn that species can change over time, a process modern creationists call "micro-evolution." Joe Wilkey, a genial bear of a man who heads the science department, can't think of anyone on his staff of nine teachers who believes in "macro-evolution"—the evolutionary origins of all life—and no one teaches it. If a student asks why a textbook states that dinosaurs lived 65 million years ago when his parents and his minister have told him that God created the world 6,000 years ago, Wilkey answers that people disagree about the earth's origins, and that some scientists trace the fossil record to the biblical flood. He doesn't teach creationism; it's not part of the state curriculum. "But I do not believe it would hurt a thing to teach intelligent design."

THE SCOPES TRIAL RAN for eight days in the middle of a July heat wave. Dayton worked hard to get ready for it. The big courtroom got a new coat of paint and was outfitted with 500 additional seats and a platform for a newsreel camera. New microphones installed in the courtroom were connected to speakers out on the lawn, so the expected overflow crowds could follow the proceedings, and a Chicago radio station arranged to use those same microphones to broadcast the trial live. Western Union strung wire for 22 telegraph operators to transmit breaking news to newspapers and radio stations across the country. To meet increased demand, the Southern Railway expanded its passenger service to Dayton.

Although folks in town couldn't abide the notion of monkeys as kinfolk, they had no reservations about exploiting them for fun and profit. While vendors sold popcorn, ice

GREG FOSTER

cream and cold drinks, hucksters hawked monkey souvenirs, including a coin minted by the Progressive Dayton Club that featured a monkey wearing a boater. A circus sent a gorilla in a freight car and charged a dime to see it. At his drugstore, Frank Robinson entertained customers with a besuited chimp that sipped "simian soda" and played a toy piano. Other stores advertised their wares with monkey displays, and the constable decorated his motorcycle with a "Monkeyville Police" sign. Meanwhile, Mencken observed, the courthouse lawn was "peppered" with evangelists, "and their yells and bawlings fill the air with orthodoxy."

More than 3,000 visitors showed up for the trial and the monkeyshines, and they all needed a place to eat and sleep. Some Daytonians rented their houses and left town. Many others let out rooms or sold home-cooked meals. Ann Gabbert Bates, druggist Robinson's 61-year-old granddaughter, remembers her mother telling how her own mother fed lots of journalists, "except Mr. Mencken. He wasn't welcome."

The visiting members of the press did not ingratiate themselves with their hosts. When an elderly woman asked one of the two reporters staying with her why he wrote that people in Dayton said "hain't" and "sech" and wore ragged clothes, he told her his paper wanted him to add "color." The other reporter never even bothered going to the courthouse because, he said, "I know what my paper wants me to write."

Longtime resident Richard Cornelius, a retired English professor, used to get his hair cut at Wilkey's Barbershop, where older habitués still laughed about a trick that was cooked up there for the newspapermen. After George Rappleyea, one of the chief drugstore plotters, sauntered in one day and began praising evolution, his partner, Thurlow Reed, yelled, "You can't call my ancestors monkeys!" and pretended to attack him. The Northern reporters ate it up because it matched their preconceptions about volatile Southerners. When another Dayton jokester shot off his pistol in front of the barbershop one day, he generated still more colorful copy—and more local glee at the reporters' expense.

Eloise Reed, an elegant 92-year-old widow whose attractive home sits a few blocks from the courthouse, was 12 that summer. Her brother Crawford had been playing tennis with John Scopes when the schoolteacher was summoned to the drugstore. After Scopes returned to the tennis court, he told Crawford about the scheme, which the youngster relayed to the family that night at supper. "We laughed," Reed recalls. "It didn't seem like any big deal." But then Bryan announced he was coming, followed by Darrow, and the excitement started to build.

When Bryan gave a sermon against evolution at the Southern Methodist church one Sunday, Eloise Reed was sitting near the front. Later, she shook his hand. She saw him and Darrow many times. Bryan was taller, she says. "And he stood tall. Darrow draped a little." Darrow was indeed stooped, and he wore baggy clothes and colorful wide suspenders. In contrast to Bryan's orotund grandiloquence, Darrow's speaking style was conversational, down-home and cuttingly quick. Working pro bono for the ACLU, he led a team of big-city lawyers. Tom Stewart, the astute district attorney, directed the prosecution with help from, among others, Bryan, his son, William Jr., old Ben McKenzie and his son Gordon. Judge John Raulston, a conservative lay Methodist minister, presided. All but one of the jurors belonged to local evangelical churches. On the trial's opening day, Judge Raulston read aloud the first chapter of Genesis.

Bryan, 65, and Darrow, 68, shook hands like boxers before the bell. They had once been political allies, back in the days when Bryan, who served as Woodrow Wilson's secretary of state, was known as "the Great Commoner," a passionate advocate of corporate reform, female suffrage and a progressive income tax. Teddy Roosevelt, no admirer, called him "a professional yodeler, a human trombone." Bryan left politics to become a crusader against Darwinism, which he blamed for atheism and a host of social and corporate ills. By the time of the trial, Darrow, a fierce rationalist, had long since concluded that Bryan was hazardous to the country's intellectual health. He intended to demolish him. "Nothing will satisfy us but broad victory, a knockout which will . . . prove that America is founded on liberty and not on narrow, mean, intolerable and brainless prejudice of soulless religio-maniacs," Darrow said.

Darrow's strategy was aimed less at exonerating Scopes than in discrediting the anti-evolution law. He assembled a distinguished group of scientists and religious leaders to testify that there was no conflict between evolution and belief in God; that many devout people also believed in evolution, and that the state should not allow a particular religious viewpoint to dictate or censor public-school curricula. His opening speech lasted two hours and awed even the opposition. Ben McKenzie told Darrow it was "the greatest speech that I have ever heard on any subject in my life."

Though McKenzie wryly referred to all of the Northern attorneys as "foreigners," he and Darrow struck up a lasting friendship. Ben's grandson, Jimmy, recently came across the family copy of Darrow's 1932 autobiography, inscribed: "To my esteemed and valued friend . . . with the kindest remembrances." A black-and-white photograph in Jimmy's office at the Dayton courthouse shows Ben with his arm around Darrow. It was no secret both men liked to drink, Jimmy says. "Darrow and others would go to my grandfather's office at the end of the day and tell war stories. My daddy said it was a show."

Since the town was dry, the booze consumed during those raucous get-togethers had to be bootlegged. Mary Welch, a 72-year-old widow, heard all about that from her father-in-law, Luther Welch. He was a road commissioner and a good Christian, she says, but he didn't mind having a drink once in a while. At the time of the trial, he was a teenager, she recalls, and "he would go to Chattanooga in an old farm truck to get liquor for the lawyers on both sides."

Prosecutor Tom Stewart didn't want Darrow's shrewd eloquence and all-star experts to derail the trial. As it wore

on, he constantly reminded Judge Raulston the case wasn't about creationism or academic freedom but solely about whether Scopes had broken the law. After Raulston agreed to prevent Darrow's experts from testifying before the jury, Mencken and many of the other reporters decided that was it for Scopes, so they left town and missed out on the biggest fireworks of all.

On the seventh day, the trial was moved from the stifling courtroom to a platform beneath the big oak trees on the lawn. There, after challenging Bryan to take the stand, Darrow asked him a series of questions designed to show that belief in the literal truth of the Bible was preposterous in light of current knowledge, and also that the Bible was subject to interpretation. Did Joshua really make the sun stand still? If so, did Bryan think the sun revolved around the earth? Did Jonah really live inside a whale for three days?

In the 1960 film version of *Inherit the Wind*, the Bryan-based character (played by Fredric March) melts down on the stand—becomes pathetic and incoherent. Actually, Bryan acquitted himself quite well, answering Darrow (Spencer Tracy in the movie) with wit and clever evasion. But eventually he did reveal that he knew little or nothing about fossils, geology, ancient civilizations or world religions. Such things did not interest him, he explained, because the Bible sufficed: "I have all the information I want to live by and to die by."

When Tom Stewart realized Bryan was not helping himself or the prosecution's case, he asked Judge Raulston, "What is the purpose of this examination?"

"The purpose," answered Bryan, "is to cast ridicule on everybody who believes in the Bible."

"We have the purpose," retorted Darrow, "of preventing bigots and ignoramuses from controlling the education of the United States."

The next day, Raulston expunged Bryan's testimony as immaterial to the case. Darrow responded by asking the court to instruct the jury to go ahead and find Scopes guilty so he could proceed with an appeal. The jury returned its unanimous verdict nine minutes later.

Scopes never spent time in jail, but the judge did fine him $100. Darrow's appeal lost (although Scopes' conviction was eventually reversed on a technicality), and Tennessee's anti-evolution law stayed in force until 1967. The Dayton school board asked Scopes to stay on, and he also had offers from Hollywood and vaudeville, but instead he accepted a scholarship to study geology at the University of Chicago. He worked as a geologist in South America and later for an oil and gas company in Texas and Louisiana. He married, had two boys, John Jr. and William, and stayed out of the spotlight.

In 1960, Scopes returned to Dayton for the world première of *Inherit the Wind* at a local drive-in (the town's only movie theater was too small), and in 1967 he published a memoir, *Center of the Storm*. He died three years later at 70. Son John Jr., 72, spent his entire career in the insurance business and now lives on Long Island. Son Bill, semi-retired at 69, also worked mainly in the insurance field. Speaking by phone from his home in Guntersville, Alabama, recently, he said: "If anybody ever got to Heaven, it was Dad. He was just a real nice person—easygoing, modest, well liked, tolerant." John senior did not talk about the trial when the boys were growing up, Bill says, and he never discussed evolution.

Harvard-educated science professor Kurt Wise teaches that God created the world and everything in it 6,000 years ago. For him, he says, "Scripture trumps interpretations of physical data."

The Scopes case was one of Darrow's last major trials. He visited Dayton with his family a few years later to be feted by the business club of Dayton, which gave him a dinner at the Aqua Hotel. When Darrow noticed a new church across from the hotel, he quipped, "Well, I didn't do so much good here after all." He died of heart disease at age 80 in 1938.

Bryan died of apoplexy five days after the trial ended while taking a nap in a bedroom of the house on S. Market Street in Dayton where he had been staying. (The house burned down in the late 1920s and has long since been replaced by another.) Some wondered whether the trial had broken his spirit and contributed to his death, but in fact Bryan felt vindicated and energized, and was enthusiastically planning another lecture tour.

In 1930, funded by donations from creationists throughout the country, William Jennings Bryan Memorial University opened in Dayton to carry on his work. Now known as Bryan College, the 110-acre campus consists of a dozen

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"The idea that evolution is shaky or just a theory," says Eugenie Scott, executive director of the National Center for Science Education, "this is absolutely amazing to scientists."

ROBIN TWOMEY

or so brick buildings scattered across a hill overlooking the town. Last year, the undergraduate enrollment was 600. According to the college's catalog, the curriculum is "based upon unequivocal acceptance of the inerrancy and authority of the Scriptures."

Kurt Wise teaches science at Bryan. His credentials are impressive—an undergraduate degree in geology from the University of Chicago and a PhD from Harvard, where he studied with the late Stephen J. Gould, the eminent paleontologist and anti-creationist. Wise believes that God created the world and everything in it 6,000 years ago.

On this July day, he is leading a group on a field trip through Grassy Cove Saltpeter Cave. Wearing headlights, the students crawl through muddy tunnels, run their hands over rough limestone columns and peer at fossil shells embedded in rock. Wise tells his students that water may have carved this extensive cave in a matter of hours about 4,000 years ago, a few centuries after Noah's Flood. He thinks the same phenomenon sculpted the Grand Canyon, though that, he says, took about three weeks.

This "catastrophic" explanation radically compresses geologic history to make it fit a literal interpretation of the Bible. For instance, Wise puts the Cambrian rock layers, usually dated from 540 million to 505 million years ago, at 2500 B.C. He tells students that geological events don't require long timelines—limestone can be simulated in a lab in two days, wood will petrify rapidly under certain conditions. Basically, what Wise and other "young earth" creationists are attempting to do is empirically explain the world in light of Genesis. "God's truth should be used to interpret—to properly interpret—all the data of the universe," Wise writes in his 2002 book, *Faith, Form, and Time*. "All the stars of the universe, all the rocks of the earth, all the organisms on its surface must be reinterpreted, as well as all the world's literature, philosophies, and religions. They can and should be reinterpreted from a Christian perspective so all these things can be taken captive under the mind of Christ."

What do most other paleontologists and geologists think of this? "Absolute bunk!" says Wise with a laugh. Does he believe evolution is flawed in and of itself, or flawed because it contradicts Genesis? His answer could have come straight from the college's namesake himself: "Scripture trumps interpretations of physical data."

Though the Scopes trial made Dayton a laughingstock in some quarters, it also made it a tourist destination. A steady stream of people visits the old courthouse these days and a few stop at the plaque where Robinson's Drug Store used to stand. Every July, Dayton puts on a three-day Scopes Festival, a modest affair that faintly echoes the original event—a few musicians on the courthouse lawn; a few vendors selling food, crafts and monkey souvenirs. In the main event put on daily, local actors restage the trial in the courtroom, speaking dialogue culled from the transcript by the wife of a Dayton minister. This time around, Bryan fares much better.

H. L. MENCKEN SAID HE EXPECTED "A SQUALID SOUTHERN VILLAGE," BUT FOUND INSTEAD "A COUNTRY TOWN FULL OF CHARM AND EVEN BEAUTY."

Richard Cornelius, 70, helped start the festival as a sort of damage-control project. He attended Bryan College and has lived in Dayton since 1961, when he joined the faculty, and over the years he has interviewed eyewitnesses and written articles "to show that perhaps we don't need to be quite so embarrassed."

Actually, not all of the publicity Dayton received at the time of the trial or since has been embarrassing. Mencken said he expected "a squalid Southern village," but instead found "a country town full of charm and even beauty," where the "Evolutionists and the Anti-Evolutionists seem to be on the best of terms." The next day he reported that "there is an almost complete absence, in these pious hills, of the ordinary and familiar malignancy of Christian men. . . . There

CONTINUED ON PAGE 61

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Eloise Reed was 12 years old at the time of the trial and heard Bryan preach a sermon against evolution in church. Bryan was taller, she says. "And he stood tall. Darrow draped a little."

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AFTER SCOPES RETURNED TO THE TENNIS COURT, HE TOLD ABOUT THE SCHEME. "WE LAUGHED," REED RECALLS. "IT DIDN'T SEEM LIKE ANY BIG DEAL."

is absolutely no bitterness on tap. But neither," he added, "is there any doubt."

That description still applies. Dayton has more than 30 churches; Rhea County, with 28,400 people, has more than 140. The semiweekly *Herald-News* runs a biblical quote on every front page, the Dayton Coffee Shop sells religious CDs near the Jesus posters, and evangelical preachers compete with each other on the radio day and night. Even so, many Daytonians cringe anytime the extremists among them reinforce old stereotypes, as happened last year when the county commissioners voted not only to oppose gay marriage, but to recommend that the state prosecute homosexuals for crimes against nature. Sure enough, most outside news stories mentioned the monkey trial, implying that history was repeating itself.

Mary Brooks says she is "a pretty strong Christian person," but she doesn't like "the way people get lumped into backwoods ignorant stereotypes. I know there's some of that here, but it's not the majority." As one of Dayton's new boosters, Brooks focuses on economic rather than religious revival. Seven years ago, she bought the empty hardware store near the courthouse and turned it into an upscale shop that sells antiques and home accessories, with a coffee bar on one side. The store did well enough that Brooks bought six more run-down buildings. One became a deli, another houses her daughter's bakery. Brooks' example has inspired other merchants to open their own specialty gift stores. "It's a work in progress," she says of the budding revival, "but I do think we're on our way. The other morning we must have had 40 kids in here from Bryan College getting cappuccinos and espressos."

Those old soda fountain plotters would be every bit as proud of Dayton's progress as Bill Hollin, 68, who was the town's director of development and tourism until he retired last year. "Rhea County is going to change," he predicts. But Hollin knows as well as anyone that still more change in his fundamentalist neck of the woods will require some earnest soul-searching. Hollin is convinced, for example, that Dayton, which remains almost as dry as it was in John Scopes' time, needs "some medium-to-better" restaurants, like Appleby's or O'Charlies. "But it's hard to bring them in, because they can't make it without a bar," he acknowledges. Two years ago a neighboring town approved liquor-by-the-drink. "And now they've got all those major restaurants!" says Hollin, sounding envious. "Not that I can recommend liquor-by-the-drink," he quickly adds. "I'm a deacon."

Less than a decade after their first contact with the outside world, the volatile Korubo of the Amazon still live in almost total isolation. Their fiercest champion, Indian tracker Sydney Possuelo, is trying to keep their world intact. But how long can he, and they, hold out?

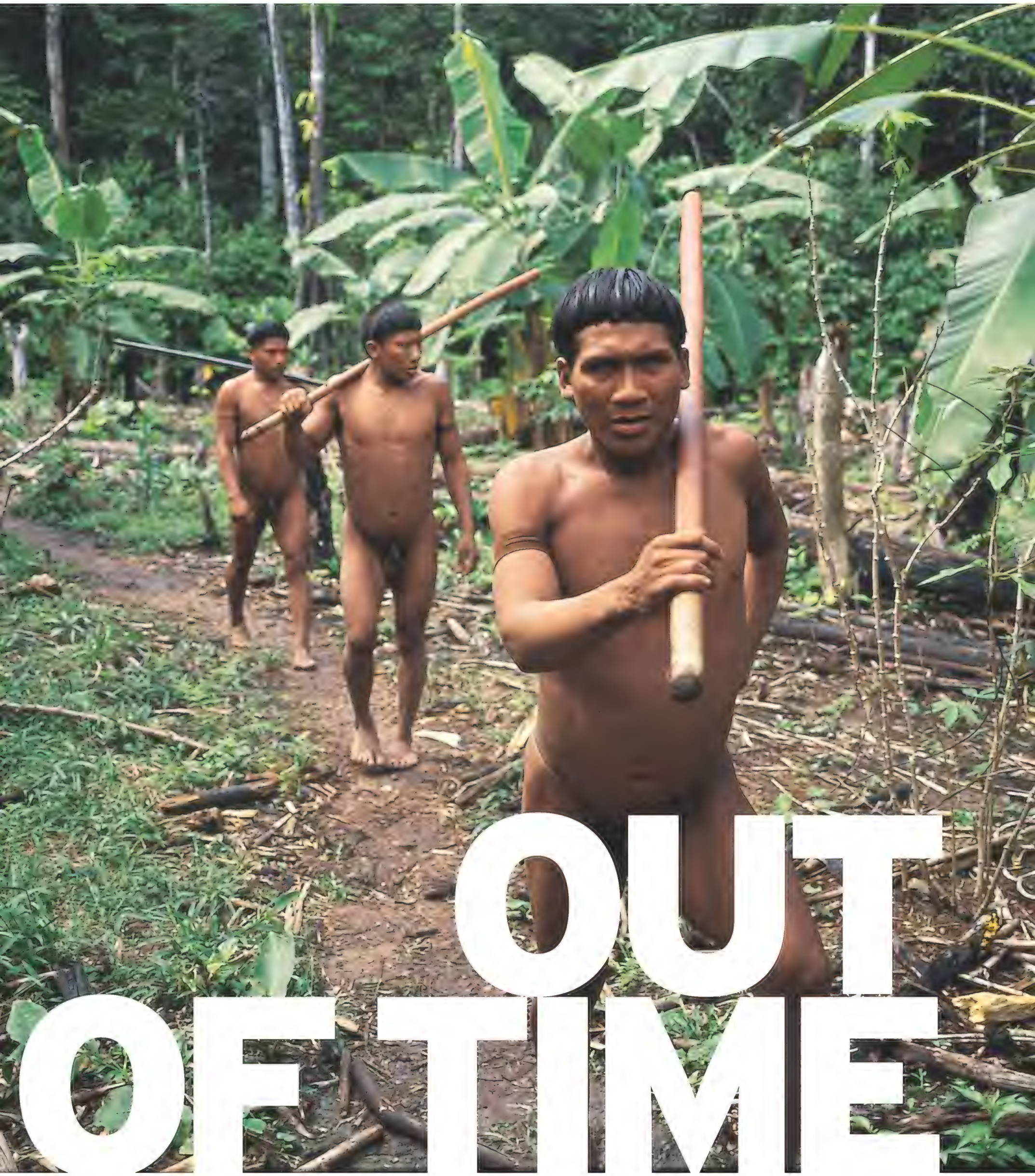
TEXT AND PHOTOGRAPHS
BY PAUL RAFFAELE

DEEP IN THE AMAZON JUNGLE, I stumble along a sodden track carved through steamy undergrowth, frequently sinking to my knees in the mud. Leading the way is a bushy-bearded, fiery-eyed Brazilian, Sydney Possuelo, South America's leading expert on remote Indian tribes and the last of the continent's great explorers. Our destination: the village of a fierce tribe not far removed from the Stone Age.

We're in the Javari Valley, one of the Amazon's "exclusion zones"—huge tracts of virgin jungle set aside over the past decade by the government of Brazil for indigenous Indians and off limits to outsiders. Hundreds of people from a handful of tribes live in the valley amid misty swamps, twisting rivers and sweltering rain forests bristling with anacondas, caimans and jaguars. They have little or no knowledge of the outside world, and often face off against each other in violent warfare.

About half a mile in from the riverbank where we docked our boat, Possuelo cups his hands and shouts a melodious "Eh-heh." "We're near the village," he explains, "and only enemies come in silence." Through the trees, a faint "Eh-heh" returns his call.

On the lookout for enemies, a warrior named Ta'van leads a patrol through the jungle. Several hundred Indians—some never seen by outsiders—live in the Amazon's Javari Valley.



OUT OF TIME

The man in the white hat: Sydney Possuelo, relaxing with several Korubo outside their hut, says he's protecting Native tribes by cutting off their lands from the outside world. Possuelo heads Brazil's Department for Isolated Indians.

We keep walking, and soon the sunlight stabbing through the trees signals a clearing. At the top of a slope stand about 20 naked Indians—the women with their bodies painted blood red, the men gripping formidable-looking clubs. "There they are," Possuelo murmurs, using the name they're called by other local Indians: "Korubo!" The group call themselves "Dslala," but it's their Portuguese name I'm thinking of now: *caceteiros*, or "head-bashers." I remember his warning of a half-hour earlier as we trudged through the muck: "Be on your guard at all times when we're with them, because they're unpredictable and very violent. They brutally murdered three white men just two years ago."

MY JOURNEY several thousand years back in time began at the frontier town of Tabatinga, about 2,200 miles northwest of Rio de Janeiro, where a tangle of islands and sloping mud banks shaped by the mighty Amazon forms the borders of Brazil, Peru and Colombia. There, Possuelo and I boarded his speedboat, and he gunned it up the Javari River, an Amazon tributary. "Bandits lurk along the river, and they'll shoot to kill if they think we're worth robbing," he said. "If you hear gunfire, duck."

Australian PAUL RAFFAELE covered guerrilla abduction of Ugandan children in the February 2005 issue of SMITHSONIAN.

A youthful, energetic 64, Possuelo is head of the Department for Isolated Indians in FUNAI, Brazil's National Indian Bureau. He lives in the capital city, Brasília, but he's happiest when he's at his base camp just inside the Javari Valley exclusion zone, from which he fans out to visit his beloved Indians. It's the culmination of a dream that began as a teenager, when like many kids his age, he fantasized about living a life of adventure.

The dream began to come true 42 years ago, when Possuelo became a *sertanista*, or "backlands expert"—drawn, he says, "by my wish to lead expeditions to remote Indians." A dying breed today, the sertanistas are peculiar to Brazil, Indian trackers charged by the government with finding tribes in hard to reach interior lands. Most sertanistas count themselves lucky to have made "first contact"—a successful initial nonviolent encounter between a tribe and the outside world—with one or two Indian tribes, but Possuelo has made first contact with no fewer than seven. He's also identified 22 sites where uncontacted Indians live, apparently still unaware of the larger world around them except for the rare skirmish with a Brazilian logger or fisherman who sneaks into their sanctuary. At least four of these uncontacted tribes

are in the Javari Valley. "I've spent months at a time in the jungle on expeditions to make first contact with a tribe, and I've been attacked many, many times," he says. "Colleagues have fallen at my feet, pierced by Indian arrows." Since the 1970s, in fact, 120 FUNAI workers have been killed in the Amazon jungles.

Now we're on the way to visit a Korubo clan he first made contact with in 1996. For Possuelo it's one of his regular check-in visits, to see how they're faring; for me it's a chance to be one of the few journalists ever to spend several days with this group of people who know nothing about bricks, or electricity, or roads or violins or penicillin or Cervantes or tap water or China or almost anything else you can think of.

Our boat passes a river town named Benjamin Constant, dominated by a cathedral and timber mill. Possuelo glares at both. "The church and loggers are my biggest enemies," he tells me. "The church wants to convert the Indians to Christianity, destroying their traditional ways of life, and the loggers want to cut down their trees, ruining their forests. It's my destiny to protect them."

AT THE TIME THE PORTUGUESE explorer Pedro Cabral strode ashore in A.D. 1500 to claim Brazil's coast and vast inland for his king, perhaps as many as ten million Indians lived in the rain forests and deltas of the world's second-longest river. During the following centuries, sertanistas led white settlers into the wilderness to seize Indian lands and enslave and kill countless tribespeople. Hundreds of tribes were wiped out as rubber tappers, gold miners, loggers, cattle ranchers and fishermen swarmed over the pristine jungles. And millions of Indians died from strange new diseases, like the flu and measles, for which they had no immunity.

When he first became a sertanista, Possuelo himself was seduced by the thrill of the dangerous chase, leading hundreds of search parties into Indian territory—no longer to kill the Natives, but to bring them out of their traditional ways and into Western civilization (while opening up their lands, of course, to outside ownership). By the early 1980s, though, he had concluded that the clash of cultures was destroying the tribes. Like Australia's Aborigines and Alaska's Inuit, the Indians of the Amazon Basin were drawn to the fringes of the towns that sprang up in their territory, where they fell prey to alcoholism, disease, prostitution and the destruction of their cultural identity. Now, only an estimated 350,000 Amazon Indians remain, more than half in or near towns. "They've largely lost their tribal ways," Possuelo says. The cultural survival of isolated tribes like the Korubo, he adds, depends on "our protecting them from the outside world."

In 1986, Possuelo created the Department for Isolated Indians and—in an about-face from his previous work—championed, against fierce opposition, a policy of discouraging contact with remote Indians. Eleven years later he defied powerful politicians and forced all non-Indians to leave the Javari Valley, effectively quarantining the tribes that remained. "I expelled the loggers and fishermen who were killing the Indians," he boasts.

Most of the outsiders were from Atalaia—at 50 miles downriver, the nearest town to the exclusion zone. As we pass the town, where a marketplace and huts spill down the riverbank, Possuelo tells a story. "Three years ago, more than 300 men armed with guns and Molotov cocktails"—angry at being denied access to the valley's plentiful timber and bountiful fishing—"came up to the valley from Atalaia planning to attack my base," he says. He radioed the federal police, who quickly arrived in helicopters, and after an uneasy standoff, the raiders turned back. And now? "They'd still like to destroy the base, and they've threatened to kill me."

For decades, violent clashes have punctuated the long-running frontier war between the isolated Indian tribes and "whites"—the name that Brazilian Indians and non-Indians alike use to describe non-Indians, even though in multiracial Brazil many of them are black or of mixed race—seeking to profit from the rain forests. More than 40 whites have been massacred in the Javari Valley, and whites have shot dead hundreds of Indians over the past century.

But Possuelo has been a target of settler wrath only since the late 1990s, when he led a successful campaign to double the size of the exclusion zones; the restricted territories now take up 11 percent of Brazil's huge landmass. That's drawn the attention of businessmen who wouldn't normally care much about whether a bunch of Indians ever leaves the forest, because in an effort to shield the Indians from life in the modern age, Possuelo has also safeguarded a massive slab of

MIKE REAGAN

the earth's species-rich rain forests. "We've ensured that millions of hectares of virgin jungle are shielded from the developers," he says, smiling. And not everyone is as happy about that as he is.

About four hours into our journey from Tabatinga, Possuelo turns the speedboat into the mouth of the coffee-hued Itacuai River and follows that to the Itui River. We reach the entrance to the Javari Valley's Indian zone soon afterward. Large signs on the riverbank announce that outsiders are prohibited from venturing farther.

A Brazilian flag flies over Possuelo's base, a wooden bungalow perched on poles overlooking the river and a pontoon containing a medical post. We're greeted by a nurse, Maria da Graca Nobre, nicknamed Magna, and two fearsome-looking, tattooed Matis Indians, Jumi and Jemi, who work as trackers and guards for Possuelo's expeditions. Because the Matis speak a language similar to the lilting, high-pitched Korubo tongue, Jumi and Jemi will also act as our interpreters.

A monthly visitor to the group, nurse Maria da Graca Nobre, or Magna, inoculates a warrior against the flu. Diseases such as malaria or the flu, unknown here before the Portuguese conquest in 1500, have killed millions of Brazilian Indians.

In his spartan bedroom, Possuelo swiftly exchanges his bureaucrat's uniform—crisp slacks, shoes and a black shirt bearing a FUNAI logo—for his jungle gear: bare feet, ragged shorts and a torn, unbuttoned khaki shirt. In a final flourish, he flings on a necklace hung with a bullet-size cylinder of antimalarial medicine, a reminder that he's had 39 bouts with the disease.

The next day, we head up the Itui in an outboard-rigged canoe for the land of the Korubo. Caimans doze on the banks while rainbow-hued parrots fly overhead. After half an hour, a pair of dugouts on the riverbank tell us the Korubo are near, and we disembark to begin our trek along the muddy jungle track.

When at last we come face to face with the Korubo in the sun-dappled clearing, about the size of two football fields and scattered with fallen trees, Jumi and Jemi grasp their rifles, warily watching the men with their war clubs. The Korubo stand outside a *maloca*, a communal straw hut built on a tall framework of poles and about 20 feet wide, 15 feet high and 30 feet long.

The semi-nomadic clan moves between four or five widely dispersed huts as their maize and manioc crops come into season, and it had taken Possuelo four lengthy expeditions over several months to catch up to them the first time. "I wanted to leave them alone," he says, "but loggers and fishermen had located them and were trying to wipe them out. So I stepped in to protect them."

They weren't particularly grateful. Ten months later, after intermittent contact with Possuelo and other FUNAI fieldworkers, the clan's most powerful warrior, Ta'van, killed an experienced FUNAI sertanista, Possuelo's close friend Raimundo Batista Magalhaes, crushing his skull with a war club. The clan fled into the jungle, returning to the maloca only after several months.

Now Possuelo points out Ta'van—taller than the others, with a wolfish face and glowering eyes. Ta'van never relaxes his grip on his sturdy war club, which is longer than he is and stained red. When I lock eyes with him, he glares back defiantly. Turning to Possuelo, I ask how it feels to come face to face with his friend's killer. He shrugs. "We whites have been killing them for decades," he says. Of course, it's not the first time that Possuelo has seen Ta'van since Magalhaes' death. But only recently has Ta'van offered a reason for the killing, saying simply, "We didn't know you then."

While the men wield the clubs, Possuelo says that "the women are often stronger," so it doesn't surprise me to see that the person who seems to direct the Korubo goings-on is a woman in her mid-40s, named Maya. She has a matronly face and speaks in a girlish voice, but hard dark eyes suggest an unyielding nature. "Maya," Possuelo tells me, smiling, "makes all the decisions." By her side is Washman, her eldest daughter, grim-faced and in her early 20s. Washman has "the same bossy manner as Maya," Possuelo adds with another smile.

Their bossiness may extend to ordering murders. Two years ago three warriors led by Ta'van and armed with their clubs—other Indian tribes in the Javari Valley use bows and

Maya, the second adult from left, seems to call the shots for the Korubo, says writer/photographer Paul Raffaele. But is she the chief? Hard to say: Possuelo won't let anthropologists study the group, so its social structure remains a mystery.

arrows in war, but the Korubo use clubs—paddled their dugout down the river until they came upon three white men just beyond the exclusion zone, cutting down trees. The warriors smashed the whites' heads to pulp and gutted them. Possuelo, who was in Atalaia when the attack occurred, rushed upriver to where the mutilated bodies lay, finding the murdered men's canoe "full of blood and pieces of skull."

Grisly as the scene was, Possuelo was not displeased when news of the killing spread quickly in Atalaia and other riverside settlements. "I prefer them to be violent," he says, "because it frightens off intruders." Ta'van and the others have not been charged, a decision Possuelo supports: the isolated Indians from the Javari Valley, he says, "have no knowledge of our law and so can't be prosecuted for any crime."

AFTER POSSUELO SPEAKS quietly with Maya and the others for half an hour in the clearing, she invites him into the maloca. Jemi, Magna and most of the clan follow, leaving me outside with Jumi and a pair of children, naked like their parents, who exchange shy smiles with me. A young spider monkey, a family pet, clings to one little girl's neck. Maya's youngest child, Manis, sits beside me, cradling a baby sloth, also a pet.

Even with Jumi nearby, I glance about warily, not trusting the head bashers. About an hour later, Possuelo emerges from the maloca. At Tabatinga I'd told him I could do a *haka*, a fierce Maori war dance like the one made famous by the New Zealand national rugby team, which performs it before each international match to intimidate its opponents. "If you do a haka for the Korubo, it'll help them accept you," he says to me now.

Led by Maya, the Korubo line up outside the maloca with puzzled expressions as I explain that I'm about to challenge one of their warriors to a fight—but, I stress, just in fun. After Possuelo tells them this is a far-off tribe's ritual before battle, Shishu, Maya's husband, steps forward to accept the challenge. I gulp nervously and then punch my chest and stamp my feet while screaming a bellicose chant in Maori. Jumi translates the words. "I die, I die, I live, I live." I stomp to within a few inches of Shishu, poke out my tongue Maori-style, and twist my features into a grotesque mask. He stares hard at me and stands his ground, refusing to be bullied. As I shout louder and punch my chest and thighs harder, my emotions are in a tangle. I want to impress the warriors with my ferocity but can't help fearing that if I stir them up, they'll attack me with their clubs.

I end my haka by jumping in the air and shouting, "Hee!" To my relief, the Korubo smile widely, apparently too practiced in real warfare to feel threatened by an unarmed outsider shouting and pounding his flabby chest. Possuelo puts an arm around my shoulder. "We'd better leave now," he says. "It's best not to stay too long on the first visit."

THE NEXT MORNING we return to the maloca, where Ta'van and other warriors have painted their bodies scarlet and flaunt head and armbands made from raffia streamers. Possuelo is astonished, never having seen them in such finery before. "They've done it to honor your haka," he says with a grin.

Shishu summons me inside the maloca. Jumi, rifle at the ready, follows. The low narrow entrance—a precaution against a surprise attack—forces me to double over. As my eyes adjust to the dim light, I see the Korubo sprawled in vine hammocks strung low between poles holding up the roof or squatting by small fires. Stacked overhead on poles running the length of the hut are long slender blowpipes; axes and woven-leaf baskets lean against the walls. Holes dug into the dirt floor hold war clubs upright, at the ready. There are six small fireplaces, one for each family. Magna bustles about the hut, performing rudimentary medical checks and taking blood samples to test for malaria.

Maya, the hut's dominant presence, sits by a fireplace husking corn, which she'll soon begin grinding into mash. She hands me a grilled cob; delicious. Even the warriors are cooking and cleaning: muscular Teun sweeps the hut's earthen floor with a switch of tree leaves while Washman supervises. Tatchipan, a 17-year-old warrior who took part in the massacre of the white men, squats over a pot cooking the skinned carcass of a monkey. Ta'van helps his wife, Monan, boil a string of fish he'd caught in the river.

"The Korubo eat very well, with very little fat or sugar," says Magna. "Fish, wild pig, monkeys, birds and plenty of fruit, manioc and maize. They work hard and have a healthier diet than most Brazilians, so they have long lives and very good skin." Apart from battle wounds, the most serious illness they suffer is malaria, brought to the Amazon by outsiders long ago.

The men squat in a circle and wolf down the fish, monkey and corn. Ta'van breaks off one of the monkey's arms complete with tiny hand and gives it to Tatchipan, who gnaws the skimpy meat from the bone. Even as they eat, I remain tense, worried they could erupt into violence at any moment. When I mention my concerns to Magna, whose monthly medical visits have given her a peek into the clan members' lives unprecedented for an outsider, she draws attention to their gentleness, saying, "I've never seen them quarrel or hit their children."

But they do practice one chilling custom: like other Amazon Indians, they sometimes kill their babies. "We've never seen it happen, but they've told us they do it," Magna says. "I know of one case where they killed the baby two weeks after birth. We don't know why."

Once past infancy, children face other dangers. Several years ago, Maya and her 5-year-old daughter, Nwaribo, were bathing in the river when a massive anaconda seized the child, dragging her underwater. She was never seen again. The clan built a hut at the spot, and several of them cried day and night for seven days.

After the warriors finish eating, Shishu suddenly grips my arm, causing my heart to thump in terror. "You are *nowa*, a white man," he says. "Some nowa are good, but most are bad." I glance anxiously at Ta'van, who stares at me without expression while cradling his war club. I pray that he considers me one of the good guys.

Shishu grabs a handful of red *urucu* berries and crushes them between his palms, then spits into them and slathers the bloody-looking liquid on my face and arms. Hunching over a wooden slab studded with monkey teeth, he grinds a dry root into powder, mixes it with water, squeezes the juice into a coconut shell and invites me to drink. Could it be poison? I decide not to risk angering him by refusing it, and smile my thanks. The muddy liquid turns out to have an herbal taste, and I share several cups with Shishu. Once I'm sure it won't kill me, I half expect it to be a narcotic like kava, the South Seas concoction that also looks like grubby water. But it has no noticeable effect.

On a fishing expedition, Korubo men and boys search for lunch a mile or so downriver from their clearing. The group also eats monkeys, birds, fruit, manioc and plantains.

Other Korubo potions are not as benign. Later in the day Tatchipan places on a small fire by the hut's entrance a bowl brimming with *curare*, a black syrup that he makes by pulping and boiling a woody vine. After stirring the bubbling liquid, he dips the tips of dozens of slender blowpipe darts into it. The curare, Shishu tells me, is used to hunt small prey like monkeys and birds; it's not used on humans. He points to his war club, nestled against his thigh, and then his head. I get the message.

As the sun goes down, we return to Possuelo's base; even Possuelo, who the clan trusts more than any other white man, considers it too dangerous to stay overnight in the maloca. Early the next morning we're back, and they ask for the Maori war dance again. I comply, this time flashing my bare bottom at the end as custom demands. It may be the first time they've ever seen a white man's bum, and they roar with laughter at the sight. Still chuckling, the women head for the nearby maize and manioc fields. Shishu, meanwhile, hoists a 12-foot-long blowpipe on his shoulder and strings a bamboo quiver, containing dozens of curare darts, around his neck. We leave the clearing together, and I struggle to keep up with him as he lopes through the shadowy jungle, alert for prey.

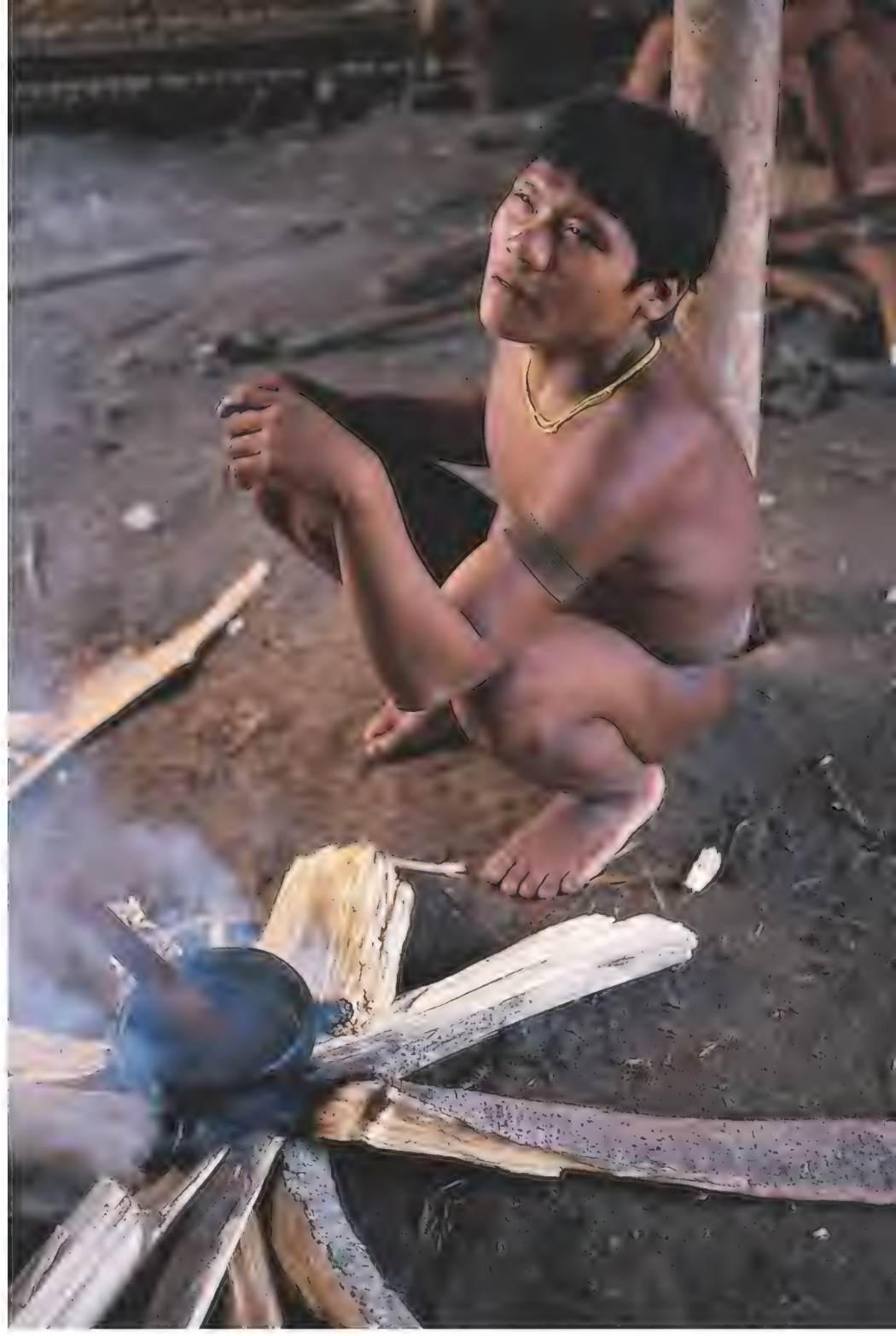
Hour slips into hour. Suddenly, he stops and shades his eyes while peering up into the canopy. I don't see anything except tangled leaves and branches, but Shishu has spotted a monkey. He takes a dab of a gooey red ocher from a holder attached to his quiver and shapes it around the back of the dart as a counterweight. Then he takes the petals of a white flower and packs them around the ocher to smooth the dart's path through the blowpipe.

He raises the pipe to his mouth and, aiming at the monkey, puffs his cheeks and blows, seemingly with little effort. The dart hits the monkey square in the chest. The curare, a muscle relaxant that causes death by asphyxiation, does its work, and within several minutes the monkey, unable to breathe, tumbles to the forest floor. Shishu swiftly fashions a jungle basket from leaves and vine, and slings the monkey over a shoulder.

By the end of the morning, he'll kill another monkey and a large black-feathered bird. His day's hunting done, Shishu heads back to the maloca, stopping briefly at a stream to wash away the mud from his body before entering the hut.

Magna is sitting on a log outside the maloca when we return. It's a favorite spot for socializing: "The men and women work hard for about four or five hours a day and then relax around the maloca, eating, chatting and sometimes singing," she says. "It'd be an enviable life except for the constant tension they feel, alert for a surprise attack even though their enemies live far away."

I see what she means later that afternoon, as I relax inside the maloca with Shishu, Maya, Ta'van and Monan, the clan's friendliest woman. Their voices tinkle like music as we men sip the herbal drink and the women weave baskets. Suddenly Shishu shouts a warning and leaps to his feet. He's heard a



Curare, smeared on darts that are blown through long pipes, brings down prey from the jungle canopy. A day before the hunt, a warrior cooks the fatal brew in the communal hut.

noise in the forest, so he and Ta'van grab their war clubs and race outside. Jumi and I follow. From the forest we hear the familiar password, "Eh-heh," and moments later Tatchipan and another clan member, Marebo, stride into the clearing. False alarm.

Next morning, after I've performed the haka yet again, Maya hushes the noisy warriors and sends them out to fish in dugouts. Along the river they pull into a sandy riverbank and begin to move along it, prodding the sand with their bare feet. Ta'van laughs with delight when he uncovers a buried cache of tortoise eggs, which he scoops up to take to the hut. Back on the river, the warriors cast vine nets and quickly haul up about 20 struggling fish, some shaded green with stumpy tails, others silvery with razor sharp teeth: piranha. The nutritious fish with the bloodthirsty reputation is a macabre but apt metaphor for the circle of life in this feisty paradise, where hunter and hunted often must eat and be eaten by each other to survive.

In this jungle haunted by nightmarish predators, animal

and human, the Korubo surely must also need some form of religion or spiritual practice to feed their souls as well as their bellies. But at the maloca I've seen no religious carvings, no rain forest altars the Korubo might use to pray for successful hunts or other godly gifts. Back at the base that night, as Jumi sweeps a powerful searchlight back and forth across the river looking for intruders from downriver, Magna tells me that in the two years she's tended to clan members, she's never seen any evidence of their spiritual practice or beliefs. But we still know too little about them to be sure.

The mysteries are likely to remain. Possuelo refuses to allow anthropologists to observe the clan members firsthand—because, he says, it's too dangerous to live among them. And one day, perhaps soon, the clan will melt back into the deep jungle to rejoin a larger Korubo group. Maya and her clan broke away a decade ago, fleeing toward the river after warriors fought over her. But the clan numbers just 23 people, and some of the children are approaching puberty. "They've told me they'll have to go back to the main group one day to get husbands and wives for the young ones," says Magna. "Once that happens, we won't see them again." Because the larger group, which Possuelo estimates to be about 150 people, lives deep enough in the jungle's exclusion zone that settlers pose no threat, he's never tried to make contact with it.

Possuelo won't bring pictures of the outside world to show the Korubo, because he's afraid the images will encourage them to try to visit white settlements down the river. But he does have photographs he's taken from a small airplane of huts of still uncontacted tribes farther back in the Javari Valley, with as few as 30 people in a tribe and as many as 400. "We don't know their tribal names or languages, but I feel content to leave them alone because they're happy, hunting, fishing, farming, living their own way, with their unique vision of the world. They don't want to know us."

IS SYDNEY POSSUELO RIGHT? Is he doing the isolated tribes of Brazil any favors by keeping them bottled up as pre-modern curiosities? Is ignorance really bliss? Or should Brazil's government throw open the doors of the 21st century to them, bringing them medical care, modern technology and education? Before I left Tabatinga to visit the Korubo, the local Pentecostal church's Pastor Antonio, whose stirring sermons attract hundreds of the local Ticuna Indians, took Possuelo to task. "Jesus said, 'Go to the world and bring the Gospel to all peoples,'" Pastor Antonio told me. "The government has no right to stop us from entering the Javari Valley and saving the Indians' souls."

His view is echoed by many church leaders across Brazil. The resources of the exclusion zones are coveted by people with more worldly concerns, as well, and not just by entrepreneurs salivating over the timber and mineral resources, which are worth billions of dollars. Two years ago more than 5,000 armed men from the country's landless workers movement marched into a tribal exclusion zone southeast of the Javari Valley, demanding to be given the land and sparking FUNAI officials to fear that they would massacre the Indians. FUNAI forced their retreat by threatening to call in the military.

But Possuelo remains unmoved. "People say I'm crazy, unpatriotic, a Don Quixote," he tells me when my week with the Korubo draws to a close. "Well, Quixote is my favorite hero because he was constantly trying to transform the bad things he saw into good." And so far, Brazil's political leaders have backed Possuelo.

As we get ready to leave, Ta'van punches his chest, imitating the haka, asking me to perform the dance one last time. Possuelo gives the clan a glimpse of the outside world by trying to describe an automobile. "They're like small huts that have legs and run very fast." Maya cocks her head in disbelief.

When I finish the war dance, Ta'van grabs my arm and smiles a farewell. Shishu remains in the hut and begins to wail, anguished that Possuelo is leaving. Tatchipan and Marebo, lugging war clubs, escort us down to the river.

The canoe begins its journey back across the millennia, and Possuelo looks back at the warriors, a wistful expression on his face. "I just want the Korubo and other isolated Indians to go on being happy," he says. "They have not yet been born into our world, and I hope they never are."

Its entrance narrow and low to discourage attacks, the hut is home to a group of 23 Korubo. Outside the jungle, Brazilians debate how much longer remote Indians can stay sheltered.

a sharp shinned hawk

brilliant
male bluebird
vying for a
female's
attention

group of
hungry finches
battling for
seeds

a
peregrine
falcon
resting before
the hunt

spring
ephemerals
that bloom
for only
a few weeks

a hidden trail
leading to a

spot
to sit and
feed the ducks

white swans to gather

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THE SURREAL WORLD OF SALVADOR Dalí

GENIUS OR MADMAN? A NEW EXHIBITION MAY HELP YOU DECIDE **BY STANLEY MEISLER**

MUSEUM OF MODERN ART, NEW YORK; P. 72 PHILIPPE HALSMAN / MAGNUM PHOTOS

Dalí (opposite, in a 1954 portrait by Philippe Halsman) claimed that the "melting" watches in his celebrated 1931 painting *The Persistence of Memory* (above) were inspired by the remains of a very strong Camembert cheese.

Salvador Dalí

spent much of his life promoting himself and shocking the world. He relished courting the masses, and he was probably better known, especially in the United States, than any other 20th-century painter, including even fellow Spaniard Pablo Picasso. He loved creating a sensation, not to mention controversy, and early in his career exhibited a drawing, titled *Sacred Heart*, that featured the words "Sometimes I Spit with Pleasure on the Portrait of My Mother." Publicity and money apparently mattered so much to Dalí that, twitching his waxed, upturned mustache, he endorsed a host of products for French and American television commercials. Diffidence was not in his vocabulary. "Compared to Velázquez, I am nothing," he said in 1960, "but compared to contemporary painters, I am the most big genius of modern time."

Dalí's antics, however, often obscured the genius. And many art critics believe that he peaked artistically in his 20s and 30s, then gave himself over to exhibitionism and greed. (He died in 1989 at age 84.) Writing in the British newspaper *The Guardian* a year ago, critic Robert Hughes dismissed Dalí's later works as "kitschy repetition of old motifs or vulgarly pompous piety on a Cinemascope scale." When Dawn Ades of England's University of Essex, a leading Dalí scholar, began specializing in his work 30 years ago, her colleagues were aghast. "They thought I was wasting my time," she says. "He had a reputation that was hard to salvage. I have had to work very hard to make it clear how serious he really was."

Now Americans will have a fresh opportunity to make up their own minds. An exhibition of more than 200 paintings, sculptures and drawings, the largest assemblage of the artist's work ever, is on view at the Philadelphia Museum of Art through May 15. The retrospective, which comes from the Palazzo Grassi in Venice, marks the climax of a worldwide celebration of Dalí that began in Spain last year on the 100th anniversary of his birth. Titled "Salvador Dalí," the show, sponsored in Philadelphia by the financial services company Advanta, plays down the exhibitionism. Visitors can thus assess the work without being assaulted by Dalí the clown. But while that makes good artistic sense, it neglects a vital aspect of the artist. After all, Dalí without the antics is not Dalí.

That is addressed in a second exhibition, "Dalí and Mass Culture," which originated in Barcelona last year, moved on to Madrid and to the Salvador Dalí Museum in St. Petersburg, Florida, and concludes its tour at the Museum Boijmans Van Beuningen in Rotterdam (March 5 to June 12). In addition to his paintings, the "Mass Culture" show features Dalí film projects, magazine covers, jewelry, furniture and photographs of his outlandish "Dream of Venus" pavilion for the 1939 New York World's Fair.

Washington, D.C.-based journalist STANLEY MEISLER, *a frequent contributor, wrote about Art Deco in the November 2004 issue.*

Salvador Felipe Jacinto Dalí Domènech was born May 11, 1904, in the Catalonian town of Figueres in northeastern Spain. His authoritarian father, Salvador Dalí Cusí, was a well-paid official with the authority to draw up legal documents. His mother, Felipa Domènech Ferres, came from a family that designed and sold decorated fans, boxes and other art objects. Although she stopped working in the family business after marriage, she would amuse her young son by molding wax figurines out of colored candles, and she encouraged his creativity. According to Dalí biographer Ian Gibson, she was proud of Salvador's childhood drawings. "When he says he'll draw a swan," she would boast, "he draws a swan, and when he says he'll do a duck, it's a duck."

Dalí had an older brother, also named Salvador, who died just nine months before the future artist's birth. A sister, Ana María, was born four years later. Dreamy, imaginative, spoiled and self-centered, the young Salvador was used to getting his own way. "At the age of six," he wrote in his 1942 autobiography, *The Secret Life of Salvador Dalí*, "I wanted to be a cook. At seven I wanted to be Napoleon. And my ambition has been growing steadily ever since." He prided himself on being different and felt himself blessed with a delicate sensitivity. Grasshoppers frightened him so much that other children threw them at him to delight in his terror.

Dalí was 16 when his mother died of cancer. "This was the greatest blow I had experienced in my life," he wrote in his autobiography. "I worshiped her. . . . I swore to myself that I would snatch my mother from death and destiny with the swords of light that some day would savagely gleam around my glorious name!" Yet eight years after her death, he would sketch the outline of Christ in an ink drawing and scrawl across it the words about spitting on his mother's portrait. (Although Dalí probably intended the work as an anticlerical statement, not a personal slur against his mother, news of it infuriated his father, who threw him out of the house.)

The precocious Dalí was just 14 when his works were first exhibited, as part of a show in Figueres. Three years later, he was admitted to the Royal Academy of Fine Arts of San Fernando in Madrid but, once there, felt there was more to learn about the latest currents in Paris from French art magazines than from his teachers, whom he believed were out of touch. (On a brief excursion to Paris with his father in 1926, he called on his idol, Pablo Picasso. "I have come to see you before visiting the Louvre," Dalí said. "You're quite right," Picasso replied.) When it came time for his year-end oral exam in art history at the academy, Dalí balked at the trio of examiners. "I am very sorry," he declared, "but I am infinitely more intelligent than these three professors, and I therefore

Dalí's portrait of his father and sister, Ana María (opposite, top left), was done in 1925, when the artist (top right, with Ana María in 1927) was just 20. His painting *The Basket of Bread* (bottom) received favorable reviews in 1928 at a major international exhibition in Pittsburgh. The work reflects his interest in *trompe l'oeil* illusionism and old master painting.

JUAN ABELLÓ COLLECTION, MADRID; FUNDACIÓN FEDERICA GARCÍA LORCA, MADRID; COLLECTION OF SALVADOR DALI MUSEUM, ST. PETERSBURG, FLORIDA
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"Without Gala," the artist once said, "Divine Dalí would be insane." His painting of her titled *My Wife, Nude, Contemplating Her own Flesh Becoming Stairs, Three Vertebrae of a Column, Sky and Architecture* (above) is from 1945. The pair (opposite, in a 1937 Cecil Beaton photograph with Dalí's two-part painting *A Couple with their Heads Full of Clouds*) were married for 48 years.

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refuse to be examined by them. I know this subject much too well." Academy officials expelled him without a diploma.

It was probably inevitable that the then-current ideas of the French Surrealists—artists such as Jean Arp, René Magritte and Max Ernst—would attract Dalí. They were trying to apply the new, psychoanalytic theories of Sigmund Freud to painting and writing. Dalí was well acquainted with Freud and his ideas about sexual repression taking the form of dreams and delusions, and he was fascinated with the Surrealists' attempts to capture these dreams in paint.

It was Spanish artist Joan Miró, a fellow Catalan allied to the Surrealists, who would bring Dalí to their attention. Miró even had his own Paris dealer look at Dalí's paintings on a visit to Figueres. Afterward, Dalí wrote to his friend the Spanish playwright and poet Federico García Lorca, whom he had met during their student days in Madrid, that Miró "thinks that I'm much better than all the young painters in Paris put together, and he's written to me telling me that I've got everything set up for me there in order to make a great hit." Miró continued to drum up interest in Dalí's work in Paris, and when the artist arrived there in 1929, Miró introduced him to many of the Surrealists.

CECIL BEATON STUDIO ARCHIVE, SOTHEBY'S / COURTESY OF FUNDACIO GALA-SALVADOR DALI, SPAIN

Dalí had come to Paris to take part in the filming of *Un Chien Andalou* (*An Andalusian Dog*), which Spanish film director Luis Buñuel, whom Dalí had also known since his student days, was directing from a script on which he and Dalí had collaborated. The 17-minute film, as incoherent as a dream, riveted—and appalled—audiences with its overt sexual and graphic imagery. Even today, it's hard not to cringe at images of a man wielding a razor against the eye of a woman, priests towing dead donkeys, and ants devouring a rotting hand. Dalí boasted that the movie, which was praised by avant-garde critics, "plunged like a dagger into the heart of Paris."

In the summer of that same year, Dalí, 25, met his future wife and lifelong companion, Gala, at his family's vacation home in Cadaqués, a picturesque fishing village on the craggy Mediterranean coast, 20 miles from Figueres. Among the visitors that summer were Buñuel, Magritte and French poet Paul Éluard and his Russian-born wife, Helena Diakanoff Devulina, better known as Gala. Ten years older than Dalí, Gala was at first put off by Dalí's showoff manner, heavily pomaded hair and air of dandyism that included a necklace of imitation pearls. His demeanor struck her as "professional Argentine tango slickness." But the two were ultimately drawn to each other, and when Gala's husband and the others left Cadaqués, she stayed behind with Dalí.

The affair proceeded slowly. It was not until the next year, according to Dalí, that in a hotel in the south of France, he "consummated love with the same speculative fanaticism that I put into my work." Dalí's father was so upset by the liaison and by Dalí's eccentric behavior that he branded him "a perverted son on whom you cannot depend for anything" and permanently banished him from the family homes. Critic Robert Hughes described Gala in his *Guardian* article as a "very nasty and very extravagant harpy." But Dalí was completely dependent on her. (The couple would marry in 1934.) "Without Gala," he once claimed, "Divine Dalí would be insane."

International acclaim for Dalí's art came not long after he met Gala. In 1933, he enjoyed solo exhibitions in Paris and New York City and became, as Dawn Ades, who curated the exhibition in Venice, puts it, "Surrealism's most exotic and prominent figure." French poet and critic André Breton, the leader of the Surrealist movement, wrote that Dalí's name was "synonymous with revelation in the most resplendent sense of the word." In 1936, Dalí, at 32, made the cover of *Time* magazine.

In addition to Freudian imagery—staircases, keys, dripping candles—he also used a host of his own symbols, which had special, usually sexual, significance to him alone: the grasshoppers that once tormented him, ants, crutches, and a William Tell who approaches his son not with a bow and arrow but a pair of scissors. When Dalí finally met Freud in London in 1938 and started to sketch him, the 82-year-old psychoanalyst whispered to others in the room, "That boy looks like a fanatic." The remark, repeated to Dalí, delighted him.

Dalí's Surrealist paintings are surely his finest work—even though his penchant for excess often led him to paint too many shocking images on a single canvas and too many canvases that seem to repeat themselves. But at his best, Dalí, a superb draftsman, could be spare and orderly. *The Persistence of Memory*, for example, features three "melting" watches, and a fourth covered by a swarm of ants. One of the watches saddles a strange biomorphic form that looks like some kind of mollusk but is meant to be the deflated head of Dalí. When New York dealer Julien Levy bought the painting for

$250 in 1931, he called it "10 x 14 inches of Dalí dynamite." The work, which was acquired by New York City's Museum of Modern Art in 1934, excited viewers even as it puzzled them. One critic urged readers to "page Dr. Freud" to uncover the meaning in the canvas.

As his fame grew, Dalí's reputation was undermined by his outrageous pronouncements. He confessed that he dreamed of Adolph Hitler "as a woman" whose flesh "ravished me." Although he insisted he rejected Hitlerism despite such fantasies, the Surrealists, who were allied to the French Communist Party, expelled him in 1939. He also later extolled Spain's fascist leader Gen. Francisco Franco for establishing "clarity, truth and order" in Spain. Yet just before the civil war began, Dalí painted *Soft Construction with Boiled Beans (Premonition of Civil War)*, in which a tormented figure, straight out of the works of Francisco Goya, tears itself apart in what Dalí called "a delirium of autostrangulation." The work is a powerful antiwar statement.

Dalí and Gala visited the United States often in the late 1930s and made it their home during World War II. The American sojourn ushered in the era of Dalí's greatest notoriety. "Every morning upon awakening," he wrote in 1953, "I experience a supreme pleasure: that of being Salvador Dalí, and I ask myself, wonderstruck, what prodigious thing will he do today, this Salvador Dalí."

Dalí admitted having a "pure, vertical, mystical, gothic love of cash." He felt impelled, he said, to accumulate millions of dollars. So he created jewelry, designed clothes and furniture (including a sofa in the form of actress Mae West's lips), painted sets for ballets and plays, wrote fiction, produced a dream sequence for the Alfred Hitchcock thriller *Spellbound* and designed displays for store windows. He took these commissions seriously. In 1939, he was so enraged when his Bonwit Teller window display in Manhattan was changed that he shoved a bathtub in it so hard that both he and the tub crashed through the window.

In 1948 Dalí and Gala moved back to their house (which Dalí had festooned with sculptures of eggs) in Port Lligat, Spain, a couple of miles along the Mediterranean coast from Cadaqués. Dalí was 44; for the next 30 years, he would paint most of the year in Port Lligat and, with Gala, divide his winters between the Hotel Meurice in Paris and the St. Regis Hotel in New York City.

"The only difference between a madman and myself," Dalí (top, c. 1965) wrote, "is that I am not mad!" The artist died in 1989 at 84 in the Dalí Theatre-Museum's Torre Galatea (above) in his hometown of Figueres.

World War II changed Dalí's ideas about painting. As he had once been in thrall to Freud, he now became obsessed with the splitting of the atom and Nobel Prize-winning physicist Werner Karl Heisenberg, leader of the German scientists who failed to develop an atomic bomb. "Dalí was acutely aware of his times," says the Philadelphia Museum of Art's Michael R. Taylor, who curated the show in Philadelphia. "He said to himself: Velázquez and Raphael—if they had lived in a nuclear age, what would they paint?"

In 1951, Dalí painted a delicate, Raphaelite head, then let it burst apart into countless pieces, swirling like cascading atoms (*Raphaelesque Head Exploding*). In a Surrealist touch, the flying particles are tiny rhinoceros horns, which Dalí regarded as symbols of chastity. Dalí dubbed his new style Nuclear Mysticism.

His work during these years was often self-indulgent. He posed Gala too many times, for instance, as an unlikely Virgin Mary and painted enormous canvases with historical and religious scenes that look overblown today. Yet this new religious imagery often pulsed with power.

His stunts, too, were self-indulgent, though some were quite funny. In 1955 he showed up for a lecture in Paris in a Rolls Royce stuffed with cauliflower. To promote *The World of Salvador Dalí,* a book he produced with French photographer Robert Descharnes in 1962, Dalí dressed in a golden robe and lay on a bed in a Manhattan bookstore. Attended by a doctor, a nurse and Gala, he signed books while wired to a machine that recorded his brain waves and blood pressure. A copy of this data was then presented to the purchaser.

For a television commercial in 1967, he sat in an airplane alongside Whitey Ford, the New York Yankees star pitcher, and proclaimed the advertising campaign slogan of Braniff Airlines in heavily accented English—"If you got it, flaunt it." Said Ford, "That's telling 'em, Dalí baby."

He flaunted it all right. In 1965 he began selling signed sheets of otherwise blank lithograph paper for $10 a sheet. He may have signed well over 50,000 in the remaining quarter century of his life, an action that resulted in a flood of Dalí lithograph forgeries.

But while Dalí could play the buffoon, he was also generous in reaching out to young artists and critics. When American Pop Art painter James Rosenquist was a struggling artist

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Whale watching off Digby

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painting billboards in New York City, Dalí invited him to lunch at the St. Regis, then spent hours discussing art and encouraging his young guest. As a graduate student in the late 1960s, Dawn Ades knocked unannounced on Dalí's door at Port Lligat. He invited her in. "Please sit down and watch me paint," he said, then answered her questions as he worked.

And Dalí's public popularity never waned. In 1974, when he was 70 years old, the town of Figueres opened the Dalí Theatre-Museum with an array of works donated by its renowned native son. The building was more of a Surrealist happening than a museum, featuring bizarre Dalí favorites such as the long black Cadillac that rained inside itself whenever a visitor dropped a coin into a slot. Hundreds of thousands of visitors still tour the museum each year.

Dalí's last years were not joyful. He had bought a castle as a retreat for Gala in the town of Púbol, and beginning in 1971, she stayed there for weeks at a time. Dalí decorated parts of the castle with ostentatious furniture, but by his own account was allowed to visit only by written invitation. His fear that Gala might abandon him almost certainly contributed to his depression and decline in health.

After Gala's death in 1982 at the age of 87, Dalí's depression worsened, and he moved into the Púbol castle attended by nurses. His incessant use of a call button caused a short circuit that set off a fire in his bed and burned his leg. Doctors transferred him to Figueres, where he lay bedridden in the Torre Galatea, an old building with a tower that had been purchased after Gala's death as an extension to the museum.

"He does not want to walk, to speak, to eat," the French photographer Descharnes, then managing Dalí's affairs, told a newspaper reporter in 1986. "If he wants, he can draw, but he does not want."

Dalí died in the Torre Galatea on January 23, 1989, at age 84 and was buried in the Dalí Theatre-Museum. For the most part, posthumous critical judgment has been harsh. "Critics believed that everything he painted after 1939 was awful junk," says the Philadelphia Museum's Taylor. "But I don't agree. There were masterpieces in his later work, perhaps not as good as the early masterpieces, but masterpieces nevertheless. Dalí should be ranked with Picasso and Matisse as one of the three greatest painters of the 20th century, and I hope our exhibition will make this clear."

Still Life—Fast Moving (1956) is rendered in what Dalí called his Nuclear Mysticism style. "The true painter," he said, "must be able, with the most usual things to have the most unusual ideas."

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FIFTY YEARS AGO, A SCIENTIFIC PANEL DECLARED JONAS SALK'S POLIO VACCINE A SMASHING SUCCESS. A NEW BOOK TAKES READERS BEHIND THE HEADLINES

BY JEFFREY KLUGER

CONQUERING POLIO

IT WASN'T EASY to make room for the newsreel cameras and television crews that streamed into Rackham Lecture Hall at the University of Michigan at Ann Arbor 50 years ago this month, not to mention the hundreds of reporters arriving from around the world. Carpenters had to build a long platform in the back of the auditorium just to give the cameramen a place to stand. As for the reporters, they would be banished to a holding room on the third floor where they could smoke and curse and shout into the phone as was their fashion, and would be summoned only when it was time for the grand announcement they had all come to hear.

The month was April, and already the temperature was rising in the states far to the south—ideal conditions for the virus that causes poliomyelitis. Sure as crocuses, the paralysis would arrive with the warm weather, twisting bodies with a randomness that confounded the best doctors. Just three years earlier, in the summer of 1952, nearly 58,000 Americans had contracted the disease, most of them children. Many would never walk again, some lost the use of their arms, others never saw another summer. The prospect of such contagion-by-calendar had shadowed every summer for the better part of a century. The possibility that the plague could be stopped for good carried sweet promise indeed.

Jonas Salk, a 40-year-old physician and researcher at the University of Pittsburgh, had been working on a vaccine against polio for years, and

"It works!" reporters shouted when it was announced that Salk (at the microphones, far left, with Thomas Francis and Basil O'Connor in April 1955) had developed an effective polio vaccine (a child in an iron lung).

CAMERA EQUIPMENT CO. N.Y.

he was closing in fast. The National Foundation for Infantile Paralysis (NFIP, now known as the March of Dimes) had given him approval to conduct a test of his vaccine. More than 1.8 million children across the country participated, and after nearly a year of tracking the subjects, a committee of senior scientists was ready to announce if the vaccine worked. That was why so many people had gone to Michigan that April day in 1955.

Salk grew up in polio's midst. Consider the summer of 1916, when what was then the worst polio epidemic in the nation's history swept through 26 states, with the greatest number of cases in New York City. Salk was just a toddler. Two brothers would be born later, but at the time just he and his mother and father, who worked in a garment factory, lived in a small apartment on Manhattan's East 106th Street. Cardboard placards began appearing on houses around the city like ugly paper boils. "INFANTILE PARALYSIS," the signs announced in block letters, and then, parenthetically, "Poliomyelitis." This was the warning that followed:

> All persons not occupants of these premises are advised of the presence of Infantile Paralysis in it and are advised not to enter.
>
> The person having Infantile Paralysis must not leave the apartment until the removal of this notice by an employee of the Department of Health.
>
> *By order of the BOARD OF HEALTH*

Doctors knew little about infantile paralysis. They knew the mossy tales of the ancient carving of a young Egyptian man with a dropped foot, a shriveled leg and a walking stick, suggesting the disease had been around for at least 3,500 years. The German Jacob von Heine wrote about the disease in 1840; Oskar Karl Medin, a Swede who built on Heine's work, described a polio outbreak in Stockholm in 1887 that claimed 44 children. They suggested that the disease had the kind of contagious character that could lead to epidemics. Later came Ivar Wickman, a pupil of Medin, who recognized that there were three different types of polio. The name poliomyelitis came from the Greek terms *polios*, for gray, and *myelon*, for marrow, and referred to the core of gray matter that ran down the center of the spinal cord, the area that was scored and scarred when a case of infantile paralysis struck. In 1908, Viennese scientists Karl Landsteiner and Erwin Popper determined that the disease was caused by a virus.

But this knowledge availed doctors little in the scourge summer of 1916. Local newspapers reported that by the first of July, 350 New York children had been paralyzed by the disease and 75 of them had died. On the afternoon of July 3, the city health commissioner issued a series of orders: of the 51 biggest celebrations planned for the upcoming Fourth of July, 15 would be canceled. Plans for city-sponsored open-air movies would also be scrapped. Children under 16 years of age would be banned from all places where large crowds gathered. Businesses caught disobeying the new regulations would be stripped of their licenses. More than half a million leaflets would immediately be printed and distributed, explaining what was known about the disease and urging the populace to take precautions.

The new rules went promptly into effect—and the polio bug slapped them aside. One hundred thirteen new cases were counted on July 5, and 133 followed on the sixth. Terrorized New Yorkers began freelancing solutions. Cats, many people concluded, were responsible for spreading the bug. When word got out that there was a bounty on the animals' heads, boys in Brooklyn rounded them up and brought them hissing and scratching to be euthanized. When the bounty turned out to be a rumor, the boys killed the cats themselves.

More than 70,000 cats were killed that month, but the epidemic roared on. If cats weren't responsible, perhaps mosquitoes were. If it wasn't mosquitoes, it was rats or sewers or the always dirty Gowanus Canal that runs through the heart of Brooklyn. New Yorkers called, cabled and wrote the Department of Health with all manner of things they were certain were causing the plague, including high groundwater, ice-cream cones, excavations, flies, bedbugs, street dust, cornflakes, the subway, parasites in the water, alloys in cooking utensils, gases from munitions factories, the bent-over position children assumed at school desks, mercury poisoning, white clothing, earthquakes, volcanoes, electrical disturbances, sunburn, intestinal derangements, secondhand bedding, decayed food, excessive glare, unclean milk bottles, carrying coins in the mouth and tobacco.

Tens of thousands of people decided to quit the city altogether. For families without the means to flee, like Jonas Salk's, there was little to do but wait. Salk turned 2 years old in October, the same month the weather at last grew cool and New York City could begin to put the season of terror behind it. In the end, the doctors counted 27,000 cases of poliomyelitis around the country, 6,000 of them fatal. Nine thousand of the victims lived in the boroughs that made up New York City.

Salk was too young to remember what his city endured that summer, but he had heard the tales and learned them well. Some 20 years later, he entered New York University (NYU) Medical School with a plan to become not a practicing physician but a researcher. By the time a patient came wheezing or aching into a doctor's office, he reasoned, a disease had already scored a hit. Better to develop ways to prevent people from getting sick in the first place.

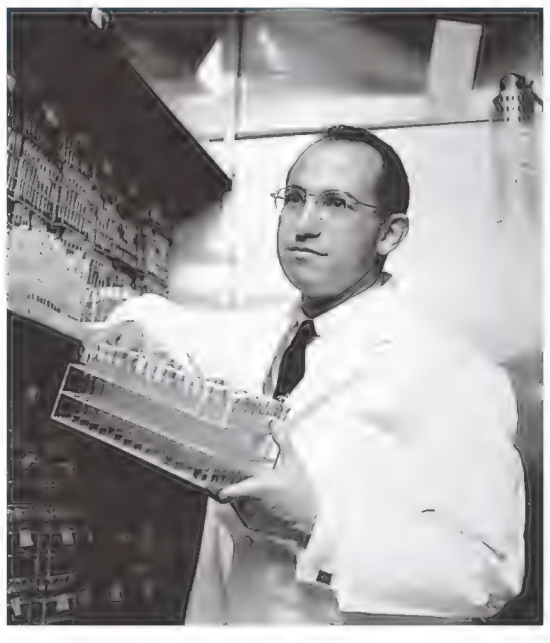
In 1942, not long after completing his residency, Salk had a chance to do just that, when he went to the University of Michigan to work with the celebrated microbiologist Thomas Francis. During World War I, millions of people worldwide had died of the great influenza pandemic, with soldiers on the European battlefields suffering worst of all. Now, in the first full year of America's involvement in World War II, the Army wanted no health crisis heaped on top of a military crisis and ordered Fran-

Adapted from the book *Splendid Solution: Jonas Salk and the Conquest of Polio* by Jeffrey Kluger © 2004 by Jeffrey Kluger. Published by arrangement with G.P. Putnam's Sons.

P. 82 HAYWOOD MAGEE / HULTON ARCHIVE / GETTY IMAGES; PP. 82, 83 ASSOCIATED PRESS

In the 20th century, nearly half a million people in the United States contracted polio (above, a quarantined child in New York City, 1916). "We must do all within our power," said Salk (below), "to bring about the solution to the problem as soon as we can."

cis to develop a vaccine against influenza. Francis, in turn, conscripted Salk, whom he'd met at NYU when Salk was still a student. Within two years, Francis and Salk gave the military just what it had asked for—the world's first influenza preventive. By 1947, Salk left Michigan and went to the University of Pittsburgh to establish his own research lab. With one disease under control, he would now go gunning for another. What he didn't know was which one.



The NFIP, founded on January 3, 1938, by Franklin Roosevelt—the world's best-known polio victim—was always on the hunt for scientific talent. When word got out that Salk was available, the NFIP pounced, promising him lots of work and plenty of funds. Salk accepted, poured himself into basic polio research, and within a few years was trying to develop the elusive vaccine.

Earlier vaccines, such as the one against yellow fever, had shown that being protected against a viral disease required catching a tiny case of it. The vaccine had to wake up the immune system so that it could learn to recognize the virus that causes the illness and then produce antibodies that would attack and kill the pathogen if it ever invaded the body. Most vaccines achieved this by using live viruses that had been bred to be so weak that they could infect the system without doing any true harm. The problem was, there was always a chance the weakened virus could mutate back into a deadly form, afflicting the person with the very disease the vaccine was meant to prevent. Salk wanted no part of such a biological crapshoot. He preferred a vaccine made of a virus that had been not just weakened but killed—one that could introduce the bug to the body with no risk of illness at all. Salk and Francis had proved this approach could work with their influenza vaccine, made with killed virus. Salk was convinced this approach would stop polio as well.

From 1947 to 1952, Salk and his co-workers devoted themselves to polio, first coming up with techniques to prove the widely held theory that there were three different types of the virus, then working on a vaccine that could protect against all of them. To make the vaccine, they came up with ways to grow the poliovirus and then kill it, with diluted

JEFFREY KLUGER is a senior writer at Time *magazine and the co-author of* Apollo 13, *which served as the basis for the 1995 film.*

BETTMANN / CORBIS; MARCH OF DIMES

formaldehyde. Tests in lab dishes showed the techniques worked. Additional studies in mice and monkeys showed that the vaccines protected the animals from the virus—though many succumbed to the polio injections before Salk perfected his formula. In December 1951, the NFIP granted Salk permission to move on to people.

The first human subjects Salk worked with were boys and girls who had already contracted polio. They would be carrying a load of antibodies in their blood and would be immune to contracting another case of the disease in the event the vaccine went awry. Salk first tested each child's blood to determine which of the three types of poliovirus he or she carried and in what concentration. Then he injected a child with a vaccine made only from that viral type. Weeks later, he drew more of the subject's blood to see if the antibody level had risen. If it had, this would be evidence that the vaccine did in fact prod the body to muster its defenses—a critical first step.

Salk conducted his experiment at the D. T. Watson Home for Crippled Children in Leetsdale, Pennsylvania. On a hot morning in June of 1952, he set out for the home, accompanied by a pair of nurses from the Municipal Hospital in Pittsburgh. They arrived in the auditorium at the appointed hour, the nurses attired in proper white uniforms, Salk in a tie and white lab coat. Salk walked to the front, shook hands with the superintendent, smiled at the 40 volunteer students and their parents, and answered their questions.

The children had each been given a card that they would hand to a nurse when their blood was drawn so that the dates of all samples and inoculations could be recorded. Bill Kirkpatrick, then a 17-year-old boy with a back brace, leg braces and a pair of canes, remembered holding one of the cards. In the upper right corner was a "W-1." He suspected that the W stood for Watson; he knew that the 1 meant he was to go first.

Salk cast his eyes over the fidgety group of students, then looked toward the front and gave Bill a nod and a smile. The boy struggled forward, eyeballing the bristle of needles on the table.

Salk followed his gaze. "They look nasty, don't they?" he asked.

Bill nodded.

Salk inclined his head toward the other, younger children. "Hope they're not afraid of them," he said in a whisper. Bill smiled, and Salk looked inquiringly at the needles.

"OK if we proceed?" Salk asked.

The boy nodded, a little surprised to have been asked. Salk took up the syringe, slid the needle into a vein and withdrew a vial of blood. He regarded the vial closely for a moment, then labeled it carefully.

"Thank you," he said, "for going first."

Bill shrugged. "I have two nephews. I don't want them to get what I had."

Over the next two hours, the 39 other Watson volunteers came forward. After all of the blood samples had been drawn, Salk offered his thanks once more, packed up his tools and drove back to Pittsburgh.

HALF PAST SEVEN in the morning was the time Elsie Ward usually set aside to feed her babies—or that was what she liked to call them. In truth, they were monkey cells growing in test tubes, and Ward cared for them dearly. In her small corner of Jonas Salk's lab, she protected them, fretted over them, kept them nourished with warm helpings of nutrient.

It would fall to Ward to test whether the polio vaccine had worked in the Watson Home children. First, a test tube was seeded with healthy monkey cells. Serum from the blood of Watson children who'd been vaccinated that summer was then mixed with poliovirus and dripped into the test tubes. If antibodies were present in the children's blood in sufficient amount in response to the vaccine, the viruses would be disabled and the cells would survive. But if the antibodies were too weak, or too few, the viruses would be free to bloom, and the cells would die.

Whichever direction the experiment went, there was a simple way to monitor the progress. Added to the test-tube mixtures was a red dye that was sensitive to acidity. If the cells had been killed by the virus, the fluid would stay red, signaling that no antibodies had been produced. If live, healthy cells were present—protected by vaccine-induced antibodies—the dye would turn yellow, signaling success.

One morning in mid-September, Elsie Ward came to the lab earlier than usual. Just the day before, Salk had determined the time was at last right to mix the blood serum from the Watson children with the poliovirus. It could take at least 24 hours for the experiment to play out and the tubes to change—or not change—their telltale color.

Opening the main door on the first floor, Ward flipped on the lights and made her way down the checkerboard-tiled hallway. Entering her small room, she threw on the light and cast her eyes to her tidy lab station with its big rack of 128 test tubes. The first thing she noticed was an unmistakable scream of yellow flashing back to her from inside the tubes.

As a rule, Ward was not one to exclaim much. "Oh, my!" was all she would typically say—and "Oh, my!" was what she said this morning.

Other members of the team trickled in, saw what she had discovered and whooped exuberantly. Finally, Salk himself appeared. Most mornings, he did not begin his workday until he performed a little ritual, stopping in his office to remove his sport jacket and slip on his white lab coat. Today, however, he was out of uniform, clad in his jacket with the lab coat nowhere in sight. He had apparently beaten a path for Elsie Ward's lab.

"How do they look?" he asked.

Ward pointed to the rack. "It worked!" she said.

Salk made his way through the group, smiling broadly. On more than one occasion he'd told his staff that what they were looking for in their polio studies was a yes from nature—some hard confirmation that the path they were pursuing was the correct one. What he saw at Elsie Ward's workstation was that yes.

"Good for you," he said, examining the test tubes more

After tests on volunteers (below, a "Polio Pioneer" in 1954) showed that the Salk vaccine worked, millions of doses were distributed (a drive-in clinic in Glendale, California, in 1960), and the formula was given to 75 countries, including the Soviet Union.

closely. "Well done." Then he turned to the rest of the group. "OK," he said. "Now let's make sure we can do it again."

SALK AND HIS TEAM were indeed able to reproduce their findings. So consistently did they do so that in April 1954, the NFIP finally gave its approval for a nationwide field trial of 1.8 million children in 44 states. The study was conducted that spring and summer, the results collected in the fall. Throughout the long winter of 1954 and 1955, a commission headed by Thomas Francis worked to interpret what the numbers meant. On April 12, 1955—ten years to the day after the death of Franklin Roosevelt—Francis was set to issue his report in the University of Michigan's Rackham Lecture Hall.

The reporters were the first to arrive. Streaming inside, they were steered to their third-floor holding room. Dignitaries and guests arrived at the building shortly after the reporters did. Among the last to appear, in the custody of a University of Michigan public relations escort, were Donna Salk, Jonas' wife; Peter, Darrell and Jonathan, their three young sons, who recall the day clearly; and Jonas' younger brother, Lee.

With the audience in place, most eyes turned toward the stage, where an empty dais and a large lectern draped with a blue-and-gold University of Michigan banner waited. After a moment, there was a shifting in the wings, and two lines of business-suited scientists, Salk among them, walked awkwardly onto the stage and took their seats with a scraping of chairs. A large bank of bright lights flared to life in the back of the hall as 16 television and newsreel cameras began to roll. At precisely five minutes after 10:00, Hart Van Riper, the medical director of the NFIP, rose from his seat on the far left side of the dais and stepped to the lectern.

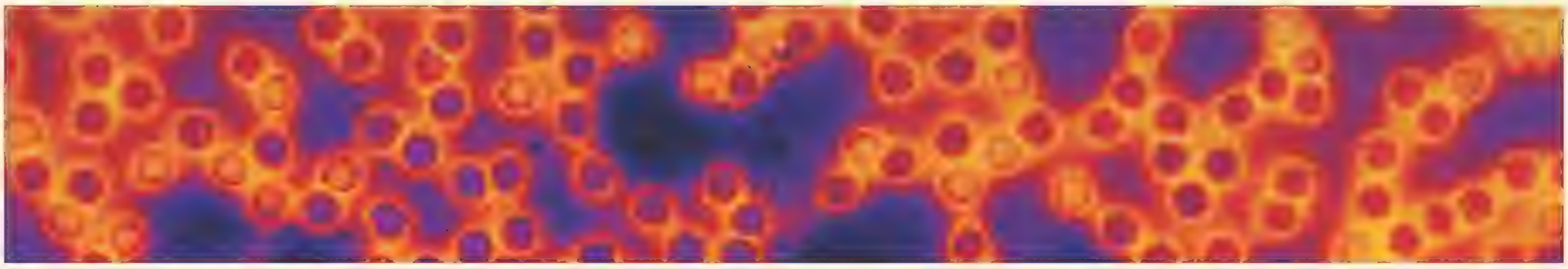
"In a letter to Mary Gladstone," he began, "Lord Acton wrote: 'The great object in trying to understand history is to get behind men and grasp ideas.'"

In her seat in the middle of the auditorium, Donna Salk noticed her sons already beginning to squirm. Jonathan, not yet 5 years old, was the worst.

"Lee," she whispered, leaning over the boys to her brother-in-law. "Would you. . . ?" She gestured to Jonathan.

Lee nodded, lifted Jonathan from his seat and carried him quietly up the aisle and out of the room.

BILL BRIDGES / TIME LIFE PICTURES / GETTY IMAGES; DETROIT NEWS



THE LONG GOODBYE

ALTHOUGH VACCINES HAVE ELIMINATED POLIO IN MOST OF THE WORLD, THE CRIPPLING DISEASE LINGERS IN A FEW OUTPOSTS

One of the great ironies of polio in the developed world was that it was a disease of good sanitation. Scattered cases of infantile paralysis had occurred for millennia, but they first began to blossom into epidemics in the 19th century—the era when indoor bathrooms and sealed plumbing were keeping hands cleaner and sewage more contained than ever before. Yet not only did polio outbreaks become more common, they became particularly so in places like Sweden and New York City, where homes were especially well piped and people especially well scrubbed.

The explanation was that while poliovirus in human waste could spread the disease, it could also inoculate against it, exposing infants and young children to frequent mild infections that caused few if any symptoms but provided a long-term load of antibodies. Remove that low background exposure and people were helpless against a strong strain of the bug that might hit you later. That made a vaccine necessary.

In 1956, the year after the Salk vaccine was approved and began being used, the polio case total in the United States was cut nearly in half, to 15,140. In 1957, it was cut by another two-thirds, to just 5,485. The number stabilized in 1958 and actually rallied a bit to 8,425 in 1959—mostly due to the failure of some families to ensure that their children completed the entire three-shot cycle the vaccination required. That scared a lot of complacent parents, who swarmed back to doctors' offices and vaccination centers. In 1961, only 1,312 American children contracted infantile paralysis, a 98 percent improvement over the epidemic of just nine years earlier. The poliovirus, it was clear, had been nearly eliminated from the U.S. population.

In 1961, Albert Sabin of the University of Cincinnati perfected a vaccine made from a live, weakened virus that was thought to provide a more lasting immunity and had the additional advantage of being administered by sugar cube or dropper. The Sabin vaccine became the preferred method for immunization and eventually knocked the national case count down into single digits.

It turned out that a few cases were brought on by the Sabin vaccine itself, as some of the weakened viruses mutated back to a dangerous state. With that risk considered unacceptable—and with the additional danger that vaccinated children could pass the live virus to family members with weakened immune systems, for whom even a hobbled virus could be deadly—the Centers for Disease Control directed in 2000 that the Salk vaccine once again be used as the principal means of controlling polio in the United States. Today, the Salk vaccine is again a standard part of the childhood vaccine regimen.

Officials say that the last wild case of polio in the United States appeared in 1979. South America declared that polio was eradicated there in 1994. Europe eradicated the disease in 2002. The world's remaining wild cases, numbering just over 1,200 in 2004, occur in six countries: Afghanistan, Egypt, India, Pakistan, Niger and Nigeria. The World Health Organization (WHO) along with Rotary International and other private charities have set 2005—fifty years after the first mass vaccination began—as the year to eliminate polio globally. WHO organizers rely on the Sabin vaccine for their inoculation project, since it is easier to administer. Even if it does cause some vaccine-associated polio cases, that risk is thought to be offset by the vastly greater number of people who will be protected by it.

Albert Sabin (above), who differed with Salk's approach, developed an effective oral vaccine that is still used in the global fight against the polio virus (top).

While the program has gone well, there is growing doubt that the eradication goal can be reached this year. Rumors that the vaccine caused sterility in children led some communities to refuse the vaccine. By the time the lie was exposed, small polio brush fires had popped up in several countries. Undoing that damage could push the final victory over the disease to 2006 or beyond. Nonetheless, the WHO still insists that polio is headed for extinction—and soon. —*JEFFREY KLUGER*

BIOPHOTO ASSOCIATES / PHOTO RESEARCHERS; CINCINNATI CHILDREN'S HOSPITAL MEDICAL CENTER

Once Van Riper completed his remarks, Harlan Hatcher, the university's president, rose and took the microphone. "Before we proceed," he said, "I'd just like to ask the platform party," he gestured broadly at Salk and the others, "to move off the stage and occupy the first two rows of the lecture hall. This is to spare you the lights and make it possible to see the charts in the talks to come."

The men on the dais looked at one another and did as they were told, standing and moving to either side of the stage, where they lined up to descend the two short staircases leading down to the audience. Only Francis remained.

"Now," said Hatcher, "I have the pleasure of presenting Dr. Thomas Francis Jr., director of the Poliomyelitis Vaccine Evaluation Center of the University of Michigan."

Francis wore a black suit, his mustache was neatly trimmed, his glasses glinted. He positioned himself behind the lectern. For Salk, low in his front-row seat in the auditorium, Francis was not easy to see. Francis shuffled the thick sheaf of papers he carried and settled himself. At 10:20, he began to speak.

"During the spring of 1954," he read, "an extensive field trial of the effectiveness of a formalin-inactivated poliomyelitis vaccine, as developed by Dr. Jonas Salk and his associates, was initiated by the National Foundation for Infantile Paralysis."

Francis spoke with little inflection, reading the text cold from the page. This, of course, was the way protocol demanded it be done at a scientific conference. And for all the sensation here today, that's what this was. Within the auditorium, the audience listened silently. Beyond the walls of the big room, the press waited invisibly. In cities around the country, 54,000 doctors stared at closed-circuit television screens. Francis talked on until finally, well into the patient presentation, he came to three exquisite bits of information, held fast in the thick amber of what he had come here to say.

"In placebo-controlled areas," he read, "the poliomyelitis vaccination was 68 percent effective against polio Type I, 100 percent effective against Type II, and 92 percent effective against Type III."

Then, for those who didn't understand the enormousness of those numbers, he said it another way. "The vaccine works. It is safe, effective, and potent."

An absolute silence continued to fill the hall, but there is silence and there is silence, and this one was filled with a noisy uncoiling. It was the uncoiling of a spring that had been wound tight since the epidemic year of 1916. It was a spring that had been tightened in the summer of 1921, when a tall man with presidential ambitions contracted a children's disease, losing the ability even to rise back up to his full height, never mind—so it appeared—to lead the nation. It was a spring that it had seemed would never uncoil, and now it did with a sudden whip crack that made no sound at all.

In the audience, Donna Salk's cheeks ran with tears, as did the faces of uncounted scientists. There was, to be sure, a lot of Francis' presentation yet to go. He spoke for an hour and 38 minutes, explaining all of the nuances of the numbers. But the three numbers he kept coming back to—68 percent, 100 percent and 92 percent—held the listeners fast. This was far better than even some of the optimists had expected. And the 68 percent, the least impressive of the three findings, was almost certainly a result of a preservative that had been added to the Type I vaccine against Salk's wishes and that could easily be removed in later manufacturing.

Francis concluded his talk and left the stage, and other foundation scientists came up to speak. Finally, at 12:05, Basil O'Connor, the president of the National Foundation for Infantile Paralysis and Franklin Roosevelt's former law partner, looked down at the front row of the auditorium and introduced Jonas Salk.

At the mention of Salk's name, a roar of applause filled the hall, and the audience members—laypeople and scientists alike—rose to their feet. Cheers and whistles joined the applause. Salk stood awkwardly in the front row, blinking a little in the camera lights. He mounted the few steps to the stage and the noise only grew. Finally, as he took his spot behind the lectern, the audience at last began to exhaust itself, became quieter and sat.

Salk spoke for only about 15 minutes, but so great was the crush of people when he left the stage that it took at least another hour for him to move beyond the front of the room, collect Donna and the boys, and fight his way out of the building. It would be another three days before the demands for newspaper interviews and television appearances would slow enough that he could gather the family up and fly home to Pittsburgh. Just before he left Rackham Lecture Hall that morning, Edward R. Murrow, the CBS journalist and former war correspondent, caught his ear for a quiet aside. "Young man," he told him, "a great tragedy has befallen you. You've lost your anonymity."

BETTMANN / CORBIS

President Eisenhower called Salk (at the White House in April 1955) "the benefactor of mankind." Salk later founded the Salk Institute for Biological Studies in La Jolla, California, where he studied multiple sclerosis and AIDS. He died in 1995 at age 80.

An exhibit at the Smithsonian's National Museum of American History, "Whatever Happened to Polio?" opens April 12.

Little Bighorn Reborn

With a new Indian memorial, the site of Custer's last stand draws descendants of victors and vanquished alike

BY TONY PERROTTET

"A BEAUTIFUL PLACE. . . ," I murmured to no one in particular, gazing down from a hilltop to cottonwood forests on both sides of a lazy river. A woman at my side finished the thought: ". . . to die."

A touch morbid for an exchange between strangers? Perhaps, but this was not just any hilltop or any day. We were part of a small crowd gathered on Last Stand Hill on the 128th anniversary of the West's most famous battle. A few feet away, in the gently swaying grass, dozens of bone-white headstones mark the military's best guesstimates of where 42 of the Seventh Cavalry soldiers fell that June 25, 1876, some having held out behind a breastwork made of their dead horses. In the center of the markers, next to a small American flag, lay the headstone of their flamboyant, controversial leader, Lt. Col. George Armstrong Custer.

Still, on that clear, sunny summer morning, it seemed hard to believe that this quiet corner of Montana had been the scene of desperate hand-to-hand combat, when Custer and 209 men under his command were wiped out by the combined forces of the Sioux, Cheyenne and Arapaho Indians.

And then a voice rang out in the distance: "Here they come!"

Suddenly, the earth began to quiver, and the breeze carried shrill cries—*yip, yip, yip*. Bursting from behind Battle

Ridge thundered 100 Lakota on horseback. Several were carrying wooden staffs adorned with colored tassels and eagle feathers, the sacred war standards of the Sioux (a name assigned to several Indian tribes, including the Lakota, who find the term offensive). For a moment, 128 years dissolved, and we were given a pale glimpse of the emotions those U.S. cavalrymen must have felt when they realized what Custer, hoping to attack an Indian camp before it could scatter, had led them into. On that fateful morning—a suffocatingly hot day—the entire valley basin had been covered with tepees, part of the largest Indian force on record. Custer and the five companies he was leading were surrounded and annihilated.

The news of Custer's defeat reached American cities just after jubilant Fourth of July centennial celebrations had concluded, stunning the nation. How could a group of "uncivilized" Indians have wiped out a modern military force, killing even a decorated Civil War hero?

Now, as I stood on Last Stand Hill, history seemed to have come full circle. Another 27 Lakota horsemen, these led by descendants of Crazy Horse, the most revered of the Sioux warriors at the 1876 battle, had ridden 360 miles in two weeks from their South Dakota reservation. They had followed the same route as their ancestors, and were now praying for their dead killed at the battle at an impressive new Indian memorial, just 50 yards northwest of Last Stand Hill. Dedicated in 2003, the memorial is a circular earth-and-stonework balustrade, with a weeping wall, interpretive panels and an elegant sculpture of Spirit Warriors—spirits of the Indian soldiers that were protecting the village that day.

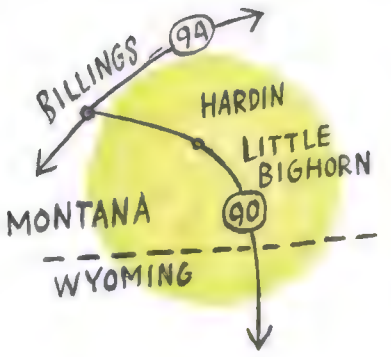
UNTIL RECENTLY, the Great Sioux Nation Victory Ride—let alone the crowds of Native Americans participating in the anniversary festivities—would have been hard to imagine here. Indians "used to believe they weren't really welcome," said Tim McCleary, 42, a historian formerly at the battlefield who now teaches at Little Bighorn College. "And not surprisingly. All the interpretation was from the U.S. cavalry point of view." Kenneth Medicine Bull, a member of the Northern Cheyenne Nation visiting the battlefield, nodded in agreement. "Before, this place felt like it was a tribute to Custer," he said. "Nothing even mentioned the Cheyenne and Sioux."

Today, for Indians and whites alike, the June anniversary has become a three-day extravaganza of religious services, aca-

Custer and his men were no match against the 1,500 or so Indians who fought against them in the Battle of Little Bighorn (above, an 1889 lithograph). Recalled one chief: the warriors enveloped the cavalrymen "like water around a stone." Below: Headstones mark where 42 soldiers fell.

demic symposia and general whooping it up. (There is not one but two reenactments of the battle, held by rival groups.) After the Sioux had ridden off, John Doerner, the park's official historian, told me that there are still visitors who believe Custer was an American martyr who died to tame the Indians as well as Custerphobes who consider him a war criminal. But the arguments over the site no longer carry the same venom they did in the 1970s, when the American Indian Movement disrupted memorial services here by carrying a flag upside down across the battlefield, singing "Custer Died for Your Sins."

"The shouts have died down to whispers now," Doerner said. "Time heals all."



BACK IN 1876, the first U.S. Army reports of the site sanitized the grisly fate of Custer's men. Lt. James H. Bradley arrived two days after the battle to help identify the slain officers and bury the dead. Not wishing to further upset the families of the fallen, he described for the *Helena Herald* an almost pastoral scene where few soldiers had been scalped and Custer's body was "that of a man who had fallen asleep and enjoyed peaceful dreams." But another eyewitness, Gen. Edward S. Godfrey, privately admitted that the reality was "a sickening, ghastly horror." Some soldiers had been stripped, scalped and mutilated. Many had had their genitals severed, some say in retaliation for the genital mutilation of Indian men and women by soldiers in previous battles. The burial party was not only sickened by the carnage but feared further attacks. With only a handful of shovels, the men hastily threw dirt over the dead, dug a shallow grave for Custer and beat a hasty retreat.

A year would pass before a second detail would come to remove the bodies of 11 officers and 2 civilians and send them to Eastern graveyards. (Indians had removed their dead shortly after the battle.) By now, as Lt. John G. Bourke noted, "pieces of clothing, soldiers' hats, cavalry coats, boots with the leather legs cut off, but with the human feet and bones still sticking in them, strewed the hill." Custer's shallow grave had been disturbed. After misidentifying one skeleton as Custer's—a blouse upon which the remains were lying identified it as belonging to a corporal—the party chose another. "I think we got the right body the second time," one member of the detail, Sgt. Michael Caddle, recalled in a letter to a historian; but another eyewitness remembered the commanding officer muttering: "Nail the box up; it is alright as long as the people think so."

Custer's 1874 expedition into the Black Hills (his wagon train near the North Dakota-South Dakota border) led to the discovery of gold and renewed fighting with the Sioux.

MAP: ERIC HANSON; MINNESOTA HISTORICAL SOCIETY / CORBIS; PP. 90,91 MICHAEL LEWIS / NATIONAL GOEGRAPHIC IMAGE COLLECTION; P. 91 GRANGER COLLECTION

Sitting Bull (above, left c. 1885), spiritual leader of the Sioux, was at the peak of his power at Little Bighorn. Custer (1875), a regimental commander, misjudged the size of the Indian camp.

The first actual sightseers at Little Bighorn were Indians. In the winter of 1876, Wooden Leg, a Cheyenne warrior and a veteran of the battle, led a nine-man hunting party to the desolate spot. Acting as tour guide, he and the group rode through hills still strewn with unexpended gun cartridges, spears, arrows and the bleached bones of cavalrymen.

Two years later, 25 recently surrendered Sioux and Cheyenne veterans provided a battlefield tour for Col. Nelson A. Miles, commander of Fort Keogh, in Montana, and a personal friend of the Custer family, who sought "the attainment of the Indian narrative of the engagement." As 400,000 visitors a year learn today, the battle involved more than just the cinematic debacle on Last Stand Hill. Early in the afternoon of June 25, Custer sent one of his three battalions, led by Maj. Marcus Reno, to attack the Indian encampment from the south. Repulsed, Reno retreated across Little Bighorn River to the bluffs beyond to be joined by a second battalion led by Capt. Frederick Benteen. The force dug in four miles southwest of Last Stand Hill, where they held out overnight against Indian attacks. After a harrowing siege, tormented by thirst and picked at by sniper fire, the soldiers saw the Indians withdraw the next afternoon; the battalions had suffered 53 killed and 52 wounded. Some 380 survived.

In 1879, the battle site fell under the jurisdiction of the War Department, and that year troops from the nearby Fort Custer erected a rough log memorial on the crest of Last Stand Hill. Native American visitation waned. The Indians who had won the battle had lost the war, and with it the right to interpret the past. Back East, Custer was turned into a hero.

It was not until 1881 that the bones of the remaining cavalrymen and their horses were finally gathered by hand into a mass grave, over which a 36,000-pound granite memorial was erected. Even then, the job was hardly thorough: in 1925, a decapitated skeleton of a trooper in Reno's command was found near the modern-day hamlet of Garryowen; another, wearing an Army tunic, was exposed in a shallow grave on Reno Hill in 1958.

The memorial, and the growing popularity of the automobile, brought more tourists to Little Bighorn. But it was not until the 1926 semicentennial of the battle that a major event was staged at the site: 50,000 people showed up, including western film star William S. Hart, to participate in services and watch a reenactment. There was an official burying of the hatchet ceremony in which General Godfrey, who had fought with Benteen and White Bull, Sitting Bull's nephew, came together to erase old hatreds. Bull gave Godfrey a blanket, and Godfrey gave White Bull an American flag. The tomahawk was buried in the grave of the soldier found the year before, as a symbolic gesture. But to some in the predominantly white

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DAVID F. BARRY / CORBIS; GRANGER COLLECTION

audience, the ceremony suggested that the Indians had accepted domination by the white man.

About this time, Nellie Beaverheart, daughter of possibly the only Indian chief killed at the battle, Lame White Man, asked for a marker from the War Department at the place where he died. The request was ignored until the 1950s, when the National Park Service, now administering the site, erected a wooden marker. Still, it took until the 1970s—with the publication of works such as Dee Brown's poignant *Bury My Heart at Wounded Knee*—for the winds of cultural change to stir the battlefield. In 1991, Barbara Sutteer, the first Native American superintendent of the site, oversaw the name change, long requested by Indians, from Custer Battlefield to Little Bighorn Battlefield National Monument. An 11-member Indian memorial design committee, authorized by the same legislation, oversaw the design and content of a memorial. A sculpture, in an opening in the north wall of the memorial, was based on the pictograph drawings of White Bird, a Cheyenne warrior who had participated in the battle at age 15. It consists of three horsemen crafted from thick black wire, representing warriors riding out to defend the Indian village from Custer's attack; a fourth figure, a woman running alongside and passing up a shield to one of the soldiers, emphasizes the importance of women in Indian life. Within the circular earthworks of the memorial, designed by Philadelphians John R. Collins and Allison J. Towers, are interpretive panels about the Native American groups. A symbolic "spirit gate" welcomes the Indians' and soldiers' spirits.

I met Sutteer, who works today as a consultant on Native American issues, at the Hardin Dairy Queen. A soft-spoken woman in her 60s, she told me she had received death threats for wanting to introduce Native American viewpoints to the site. "Of course, the battlefield has been sacred to the Indians far longer than for white people," she told me. "The quality of the grass made it an excellent hunting place. That's one reason the groups had camped here in 1876."

The attention to Indian history at the monument has highlighted some complexities of Native American culture. "White people often take Native Americans as a single monolithic culture," says Tim McCleary. The Crow and Arikara were actually on Custer's side, working as scouts. They regarded the Sioux, Cheyenne and Arapaho as invaders of their

Reenactments carried out in the town of Hardin and by local Crow (below) are a highlight of the battlefield's annual anniversary celebrations. Above: The new Indian memorial.

TONY PERROTTET (2)

homeland. "The opportunity to kill Sioux with the assistance of the U.S. military was really inviting," McCleary goes on, adding that the Arikara remain proud of their role as U.S. Army allies. To the Cheyenne and Sioux, on the other hand, the Battle of Little Bighorn climaxed long resistance to white incursions, and to this day they resent the favoritism they believe the government showed the Crow. (They also resent that the site of their greatest victory is on Crow land, adds McCleary, which allows Crow guides to give "Native American" tours. As for the Crow, they felt that the reservation they were given after the battle was too small and regard the creation of the Northern Cheyenne reservation right next door to their traditional home—with a slice of their original reservation carved off for their enemies—as a pointed insult.

Custer still stands, sort of: Steve Alexander (left) and Tony Austin portray the overeager colonel in rival reenactments.

These ancient rivalries still spill onto the battlefield today. Since 1999, five red-granite headstones have been placed to mark spots where Sioux and Cheyenne warriors fell, counterparts to white tablets erected for the men of the Seventh Cavalry in 1890. But their inscriptions, saying that each warrior "Died in Defense of His Homeland," enrage the Crow, who argue that the battle was actually on *their* homeland. "The Sioux and Cheyenne were migrating onto our land from the east and the Arapaho from the south," says Marvin Dawes, a Crow Indian historian. "Shall we say, they were passing through. They were visitors in the area."

WHEN I GOT TO HARDIN, a lonely looking, hard-bitten prairie town with a string of boarded-up bars, the place was getting ready for the anniversary that keeps its economy alive. Every hotel room was booked, and reennactors wearing bluecoats and war paint thronged the streets.

The day of the anniversary, I got to the battlefield before dawn to see, along with about 50 others, seven Cheyenne elders in cowboy hats and dark glasses conduct a peace ceremony at the Indian memorial. Donlin Many Bad Horses lit a wooden pipe and said: "When things were bad for us, we could not do this. There were times when we could not come in here. But now a door has opened to us. We can come in and worship and pray. I hope this opening will continue to grow."

One morning a couple of days later, I met Ernie Lapointe, a great-grandson of Sitting Bull. "For many years," he said, "the Lakota, Cheyenne, Arapahos, everyone didn't like the Crow. We're natural enemies. But it's time now to settle those differences, to heal all those wounds." He told me that Sitting Bull had had a vision before the battle that "told him our warriors shouldn't take the spoils of war, or injure the dead—but they did. That's why we're oppressed to this day—by the losers in the battle!"

"WHO WANTS TO SEE Custer get killed?" a man with a loudspeaker asked the thousand-strong crowd at the longest-running reenactment of the battle, hosted by the mostly white businesses of Hardin on a dusty plain just outside town. "Y-e-s-s-s!" came the roar from the bleachers, as bluecoats on horseback rode out from a wooden fort. Next to me sat Joy Austin, the wife of Tony Austin, a 50-year-old postman now living in British Columbia who plays Custer. I asked how she felt about watching her husband die three times a day. "It's OK," she answered. "The only place I get choked up is when he leads the column of soldiers over the hill. You know that he and everyone else who rides with him won't be returning."

A Crow Indian, Joe Medicine Crow, wrote the script for this reenactment. It is based, he says, on interviews with a Cheyenne veteran of the battle, with echoes of the 1940 Errol Flynn film *They Died With Their Boots On*, and emphasizes reconciliation. "In this Battle of the Little Bighorn, there were no victors. . . . We red men and white men live in a united fortress of democracy, the United States of America."

Afterward, I went to the rival reenactment—hosted by the Real Bird family of Crow Indians by the Little Bighorn River—where I ran into Jason Heitland, who portrayed a federal soldier. "I'm going to fight here every year until I'm too old to do it," he told me breathlessly as we wandered among replica military tents by a shady creek. "You're fighting on the actual battlefield! You sleep where the actual Indian camp was, where the Cheyenne dog soldiers slept. And the battle itself is totally unscripted. You've got whooping Indians coming from all directions. It's quite a thrill."

"And the horses don't know it's fake," added Nicola Sgro, a coffee salesman from Michigan in his late-30s. "That's why it's so dangerous!"

By dusk on Sunday, after the last shot had been fired and the last memorial wreath had been laid, the battlefield had returned to its eerie silence. Visiting the site one last time, I was left with a sense of sadness for those on both sides—cavalrymen who were paid $13 a month to risk their scalps in an alien land, and Indian warriors desperately trying to preserve their nomadic way of life. "This was Custer's last stand," said John Doerner, "but it was also the last stand of the Indians. Within a year after the Little Bighorn, there wasn't a truly free Indian left on the plains."

TONY PERROTTET

One Writer's Garden

In Jackson, Mississippi, preservationists are restoring the verdant retreat that sustained novelist Eudora Welty

BY WENDY MITMAN CLARKE

ON A RECENT MORNING in Jackson, Mississippi, the garden where novelist Eudora Welty once muddied her knees, fussed over camellias and cultivated a lifetime of stories hums with life. Bees hover over bright disks of zinnias, among spires of salvia and along a purple border of asters. As a breeze flutters the morning glories, a black swallowtail lands nearby. Did Welty, one of America's most celebrated and influential writers, discover her muse here?

That's precisely the kind of question that has inspired the horticulturists, historians and volunteers who have been restoring this green haven since the mid-1990s. "You know this world sparked her imagination," says English professor Suzanne Marrs, Welty's biographer, friend and neighbor. "And that may be the most important thing. What was she observing that sparked the stories, and why?"

Born in Jackson in 1909, Welty was an unflinching observer of life whose ability to penetrate the hearts and souls of a wild array of characters revealed a fearless imagination. Her impeccable attention to detail, whether in dialogue or description, grounded her work. Welty's short stories won six O. Henry Awards, and in 1973 she won the Pulitzer Prize for her novel *The Optimist's Daughter*. Over her 50-year career, nearly everything she wrote emerged from the house at 1119 Pinehurst Street in Jackson, where she worked in her second-floor bedroom overlooking the garden. "Eudora never wanted central air [conditioning] in the home," says her niece Mary Alice White, director of the Eudora Welty House. "She liked the fresh air, the open windows, to smell the fragrances."

Welty (in her 50s, c. 1962, with her mother, Chestina, outside their house, below) created the garden as a collaborative venture. The novelist called herself Chestina's "yard boy."

"CHILDREN, like animals, use all their senses to discover the world," Welty wrote in her 1984 memoir, *One Writer's Beginnings*. "Then artists come along and discover it the same way, all over again." She added that "the outside world is the vital component to my inner life. . . . My imagination takes its strength and guides its direction from what I see and hear and learn and feel and remember of my living world."

Her garden was a big part of that living world. Designed by her mother, Chestina, a passionate amateur horticulturist, it bordered the English Tudor-style house on the north, south and east sides. On three-quarters of an acre, the garden wasn't fancy or big. Trellises, hedges and borders divided the garden into small, homey "rooms." Chestina—as well as Eudora, her apprentice and self-proclaimed "yard boy"—adored it and agonized over it. Eudora's special love was camellias; she nurtured 30 varieties, and when she went to New York City to meet with her editors, Chestina would tack the delicate blooms to a cloth, box it up and send the parcel to her daughter by train.

The garden became an abiding source of inspiration for Welty, showing up throughout her stories. "It was an important source of imagery for her," Marrs says. "She thought of gar-

ROLLIE MCKENNA; DAN BORRIS

dening as a metaphor for all sorts of things, like an attempt to find order and structure and meaning."

But when she reached her 80s (her mother had died in 1966), Welty could no longer maintain the garden. She had lost the "yard man" she'd had for 40 years, and "the honeysuckle and the poison ivy had just taken over everything," says Susan Haltom, a horticulturist specializing in historic garden design and preservation, who has overseen the restoration since it began in 1994. By then, the year Haltom first met Welty, the writer had deeded her home to the state as a literary museum (the property is now administered by the Mississippi Department of Archives and History). "We went into her living room," Haltom recalls, "and she sat in this big blue chair and said, 'I can't bear to look out the window and see what has become of my mother's garden.'"

The initial idea was simply to help out "Miss Welty," as most everyone around here calls her. But as Haltom reread Welty's stories, she realized how much the garden had infused Welty's writing, and she suggested that the grounds should also be considered in the creation of the museum. The department agreed. Haltom chose to restore the garden to the period from 1925 to 1945, when it reached its full potential, and when Welty's career was blossoming as well.

Haltom, in consultation with Welty, started digging up old borders lined in concrete rubble and stone, revealing original plants like the 1920s day lilies and some of the camellias, finding remnants of Chestina's rose garden. Haltom pored over photographs Welty provided—the writer, also an accomplished photographer, had documented the garden from the roof in the 1930s. Haltom also consulted historic-garden specialists, researching plants grown at the time and locating cultivars from that period. "I can't go put in modern pansies or cosmos and think they're going to look the same," she says. "So I have to search out the actual plants that were grown then." The bearded irises on the perennial border, for instance, are pre-1945 cultivars donated by the Historic Iris Preservation Society.

After Eudora's death at 92 in 2001, Mary Alice White found Chestina's 1930s gardening journal, and there it was—the garden layout, complete with plant names and locations. And White and Haltom continue to find more details in Eudora Welty's letters and notes. "Sometimes she would write someone and say, 'I just ordered a General George Washington,' or whatever," Haltom says. "It's so much fun. It's a treasure hunt. And I'm not only trying to find the clues as to what they are, I'm trying to locate them in nurseries and to find out if anyone still grows them, and I'm propagating these for the future."

The garden opened to the public in April 2004 (the house is not scheduled to open until April 2006), and though lovely, it's still a work in progress, true to its original intent. It's a place of bent backs and dirty knees, where what one is seeking is not perfection or distance, but an honest view of real life—a view the writer who loved this garden was so gifted at giving the rest of the world.

WENDY MITMAN CLARKE freelances from her home in Annapolis, Maryland.

The novelist envisioned a garden in which flowers bloomed each month of the year (above, zinnias in October). "The outside world," wrote Welty in her 1984 memoir, *One Writer's Beginnings*, "is the vital component to my inner life."

DAN BORRIS; MAP: ERIC HANSON

A Road Less Traveled

Cape Cod's two-lane Route 6A offers a direct conduit to a New England of yesteryear

BY JONATHAN KANDELL

LANDSCAPES, like beauty, may well be colored by the eye of the beholder, but steering along tree-shaded Route 6A on a mild summer day, with blue inlets of Cape Cod Bay on one side and white picket-fenced houses on the other, I'm tempted to conclude this may be the most appealing stretch of America I know. The 34-mile, two-lane road, also known as Old King's Highway, begins in the west where Cape Cod thrusts out of the Massachusetts mainland and ends in the east where the peninsula narrows and veers abruptly north. (Another fragment of 6A, perhaps ten miles or so, lies at the outer reach of the cape, near Provincetown.)

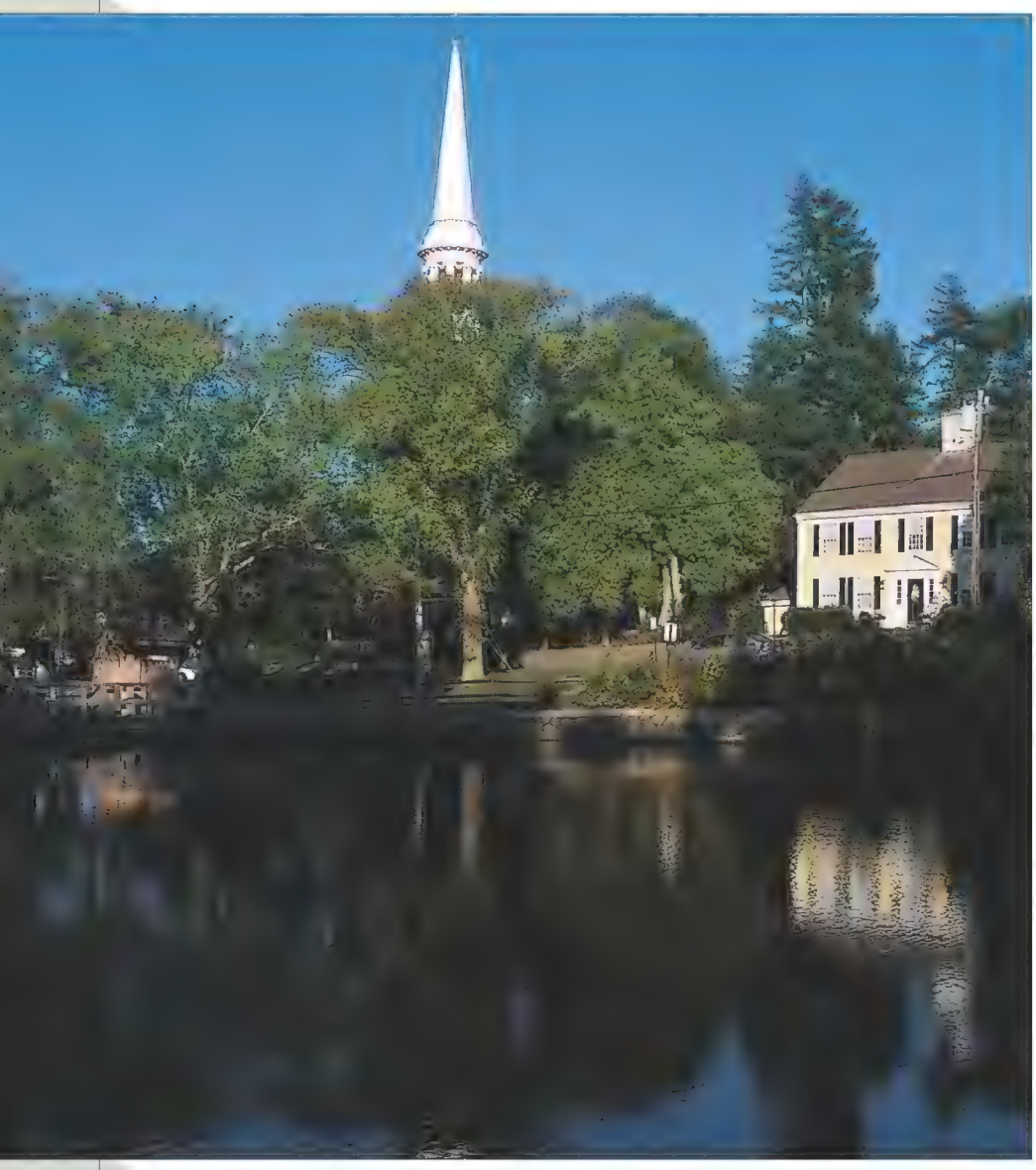
In between is a world of wonders: salt marshes and tidal flats that are cradles of marine life; woodlands reminiscent of the Berkshires; genealogy archives that draw would-be *Mayflower* descendants; church graveyards containing headstones dating back to the early 1700s; a thriving playhouse that has launched the careers of Hollywood stars; and museums that swell with visitors when the cape's temperamental weather turns soggy.

"6A's charm is no accident—it involves a lot of self-control," says Elizabeth Ives Hunter, director of the Cape Cod Museum of Art, in the town of Dennis (pop. 13,734), the midway point on the route. Every community along the way is subject to rules set by the individual town historic commissions. And they are absolutely inflexible. Signs, for instance. I drive past the Cape Playhouse in Dennis several times before finally spying a very discreet wooden slat bearing its name. "That's written large by 6A standards," managing director Kathleen Fahle assures me. "If we ever touched that road sign, we would never be allowed to put it back up again."

The theater itself has barely been altered during its 77-year existence. On its inauguration day, July 4, 1927, heavy rains leaked through the roof, forcing the audience to huddle under umbrellas at a performance of *The Guardsman*, starring Basil Rathbone. "*That* wouldn't happen today," says artistic director Evans Haile, although he does admit that some pinhole-size roof punctures do exist. Fortunately, most productions take place in fair weather. On a warm Saturday evening, I enjoy a rousing rendition of *On Your Toes*, a 1936 Rodgers and Hart musical.

Bette Davis began her career here as an usher, and Humphrey Bogart, Henry Fonda and Gregory Peck all honed their skills here before taking Hollywood by storm. Already a superstar in the 1950s, Tallulah Bankhead arrived, pet leopards in tow, for her Dennis engagements. Actress Shirley Booth, star of the 1960s sitcom "Hazel," performed here often late in her career, during the 1970s; she bequeathed to the playhouse her 1953 Oscar (for best actress in the role of Lola Delaney in *Come Back, Little Sheba)*.

The theater harks back to an era before air conditioning, when Broadway closed for the summer. Plays and casts sur-

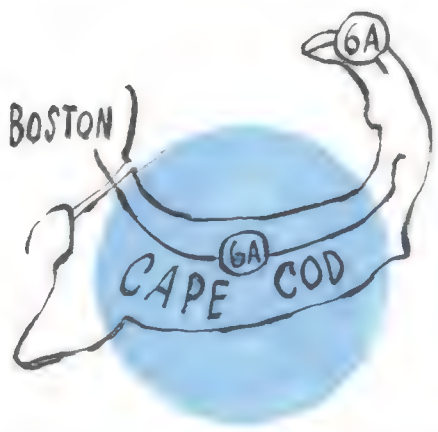


The oldest town on the cape, Sandwich (its village center overlooking Shawme Pond) was settled by Pilgrims in 1637.

JARED LEEDS (2); P. 99 MAP: ERIC HANSON

vived by touring the country; vacation retreats became important venues. Back then, performers could easily find lodging in Dennis. "We had 'landlady houses,' owned by widows who welcomed actors as guests," says Fahle. But as real estate prices soared, the notion of inviting strangers to lodge for weeks at pricey vacation homes lost its appeal.

Sharing the same plot of land as the playhouse is the Cape Cod Museum of Art. "From late June through July, we go for very accessible exhibitions," says director Hunter, citing marine scenes by Cape Cod painters or, more recently, the patriotic quilts and paintings of Ric Howard (1912-96), an illustrator who designed Christmas cards for the White House before retiring to Dennis. "By August, we are moving into edgier works," such as the recent retrospective of Maurice Freedman (1904-84), a New York City painter strongly influenced by the colors and patterns of the German Expressionists—and lured to Cape Cod by its summer light.



All of the museum's 2,000 works of art have a Cape Cod connection. The artists must either have lived or worked on the peninsula at some point—although this criterion has been broadened to include the nearby islands of Nantucket and Martha's Vineyard. "They are geologically related to Cape Cod," says Hunter with a smile.

The cape was formed by a glacier that retreated some 15,000 years ago, leaving behind the bay and the sandy peninsula that is constantly battered and reshaped by the Atlantic Ocean. By 8,000 years ago, the rising ocean had separated Nantucket and Martha's Vineyard from the peninsula's southern coast. "The basic fact of life around here is erosion," says Admont Clark, 85, a retired Coast Guard captain and founder of the Cape Cod Museum of Natural History, in Brewster (pop. 8,376), a few miles east of Dennis. "Every year, about three feet of beach are washed away and deposited elsewhere on the cape." It is pretty much a zero-sum game in the short run. But over a century or so, some ten inches of coastline are lost altogether.

During the past decade, two lighthouses, wobbling on bluffs undercut by constant waves, had to be placed on flatbed trailers and moved to more stable locations. Islets and inlets are repeatedly exposed and submerged, forcing harbor masters to update their maps frequently. Residents pay close attention to approaching storms, boarding up windows and otherwise battening down.

To walk Cape Cod's beaches and tidal flats is to be made aware that the terrain and waters shift by the hour—or the minute. The tides can fatally fool even the most knowledgeable old-timers. In the reedy wetlands behind my beachside bed-and-breakfast, I encounter the carcass of a seal, ma-

In Barnstable, 6A skirts bayside wetlands (and a fishing shack, below). The East Coast's largest marsh covers 4,000 acres here.

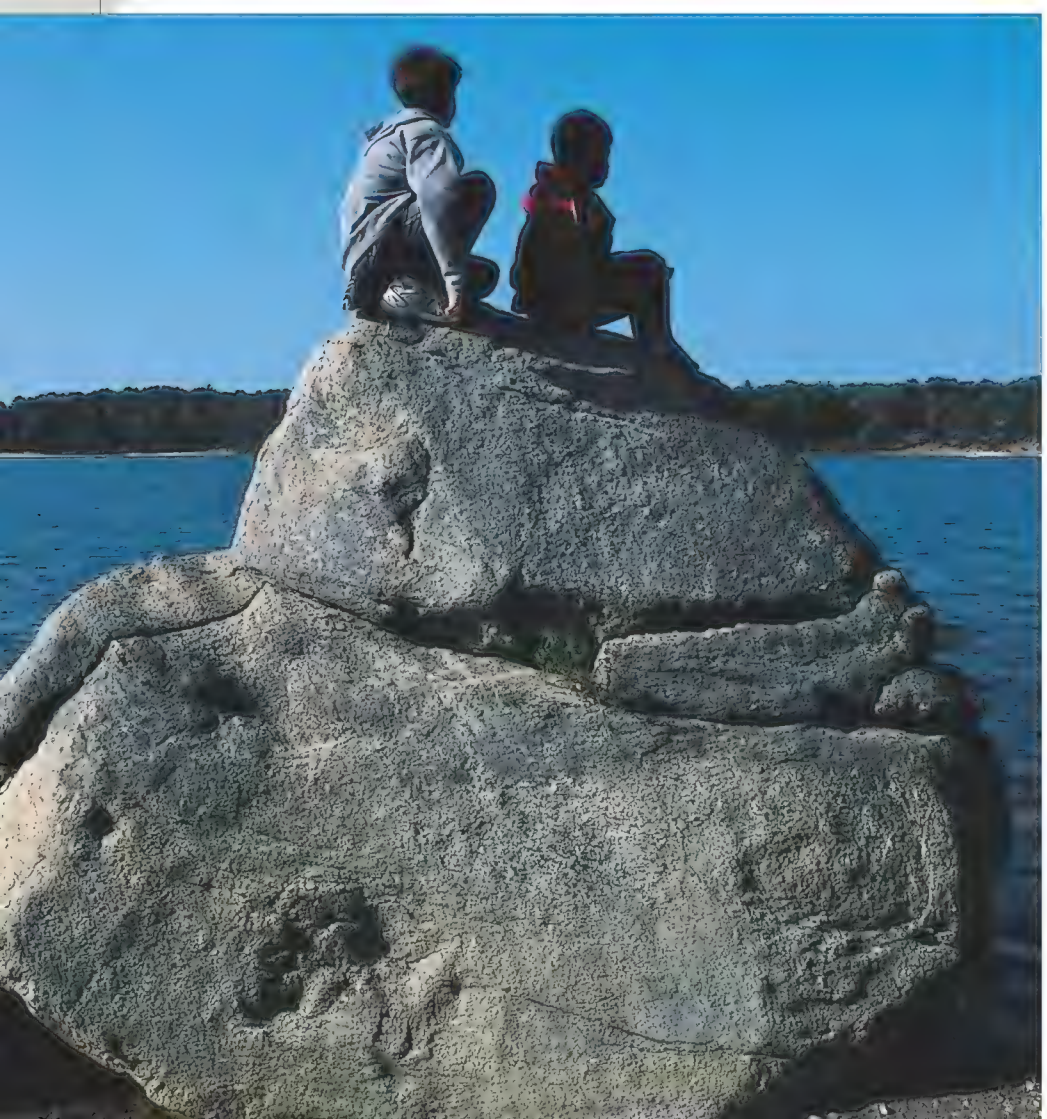
rooned by a rapidly receding tide. Clark recalls an ill-fated, 90-year-old farmer who scoured the flats for clams all his life. "One day about ten years ago the clamming was so good that he wasn't watching the rising waters around him," says Clark. "He drowned trying to swim back."

On an outing with Irwin Schorr, volunteer guide for the Museum of Natural History, I experience the vitality of this landscape. At his suggestion, I jump on a patch of grass—and bounce as if it were a mattress. "It's because of the constant tidal flooding," says Schorr. "Water is absorbed in between the grass roots and filtered underground into our aquifer."

When marsh grasses die, their stalks are absorbed into a spongy network of roots, forming peat. Bacterial decomposition nourishes crabs, crayfish and snails that in turn attract larger marine life and birds. Along the edges of a wood-planked walkway, I peer at fish—sticklebacks and silversides—feeding on mosquito larvae. The tide has risen so high we have to take off our shoes, roll up our pants and wade barefoot. A snaking column of recently hatched herring, glimmering in the tide, streaks toward the bay. Their timing is exquisite: within an hour, the water has receded so far there is a hardly a puddle left in the marsh. "The tide here rises and falls seven to nine feet every day," says Schorr.

RANGER KATIE BUCK, 23, patrols Roland C. Nickerson State Park, at the eastern end of the main part of 6A. The 2,000-acre preserve is a forest of oak, pine and spruce, populated by deer, raccoons, fox, coyotes and enough frogs to belie any

New England charm is everywhere visible (a fence in Orleans, above; a pond at Brewster's Nickerson State Park, below). In contrast to ocean or bay waters, often dauntingly chilly, Nickerson's ponds are alluringly temperate and swimmable.



global amphibian crisis. "Sometimes there are so many they stick to the door and windows of our station," says Buck.

The park was named after a banking and railway tycoon who used it as a wild game preserve in the early 1900s. Roland Nickerson imported elk and bear for weekend guests to hunt. In 1934, his widow donated the property to the state. During the Depression, the Civilian Conservation Corps planted 88,000 trees and built roads and trails throughout. The park is so popular that campsites, especially those for trailers, must be booked months ahead. The biggest attractions are "kettle ponds," some as large as lakes, created millennia ago by huge melting ice chunks left behind by retreating glaciers. "The water here is a lot warmer than the ocean or the bay," says Buck.

FOR ME, sunny mornings are for visits to old church graveyards. On the grounds of the First Parish Church of Brewster, I meet up with John Myers, 73, and Henry Patterson, 76, parishioners and history buffs. First Parish was once a favorite of sea captains; many are buried in the adjoining graveyard. Each pew bears the name of a shipmaster who bought the bench in order to help fund the church, whose origins go back to 1700. But such generosity did not guarantee everlasting gratitude. "The church was always short of money, so ministers would periodically decree that the pews be put up for auction," says Patterson.

Etched on a wall is a list of long-dead captains, many of them lost at sea. Land was no safer, as many of the 457 headstones in the graveyard attest. Some belong to soldiers of the Revolution or the Civil War. But far more mark the remains of loved ones whose premature deaths could provoke bitterness verging on blasphemy. For the 1799 epitaph of his 2-year-old son, the Rev. John Simpkins wrote: "Reader, let this stone erected over the grave of one who was once the florid picture of health but rapidly changed into the pale image of death remind thee that God destroyeth the hope of man."

Patterson and Myers discovered, too, some dark footnotes to Brewster's history as they sifted through the church archives. At elders' meetings going back more than two centuries, sinners confessed to adultery, drunkenness, lying and theft. The most scandalous case involved that quintessential American optimist, Horatio Alger, the famed author of 19th-

JARED LEEDS (2)

century rags-to-riches tales for young readers. After two years as minister of First Parish Brewster, Alger was dismissed by the church board in 1866 on charges of "unnatural familiarity with boys." He never returned to Brewster nor took up the pulpit again anywhere. "We probably launched his literary career by firing him," Myers deadpans.

Much of the archival research on Cape Cod is of a more personal nature—people trying to discover family roots. In Barnstable (pop. 48,854), another town on 6A, 13 miles from Brewster, the Sturgis Library, whose foundation was laid in 1644, draws amateur genealogists from all over. "The earliest settlers in Barnstable had Pilgrim relatives, so we get a lot of visitors trying to qualify for membership in the Mayflower Society," says Lucy Loomis, the library's director. Others seek connections, however tenuous, to the Presidents Bush, Benjamin Spock or any number of famous Americans whose ancestors lived in or near Barnstable centuries ago.

Visitors with quirkier research in mind also pore over the rich collection of local newspapers, merchant shipping records and documents donated to the library over many generations. A Californian recently spent two weeks at Sturgis looking for information about an ancestor who survived a 19th-century shipwreck and headed West with the Mormons. He "wanted to know if being saved from drowning had led his ancestor to a religious conversion," says Loomis.

Indeed, no personage or landmark is safe from scrutiny by history sleuths. No sooner have I begun sounding like a "wash-ashore"—as natives refer to a newcomer besotted enough by the cape to move here—than local historian Russell Lovell lets me in on a secret: Route 6A is of far more recent vintage than colonial times. "The name 'Old King's Highway' is a publicity gimmick," says the tall, lean octogenarian. The road was built largely in the 1920s when cars began replacing trains.

Lovell, a Sandwich (pop. 21,257) resident who wrote a 611-page tome that traces the town's history from a Pilgrim settlement in 1637 up to the present, leads me on a tour of what is most historically authentic about the place—17th-century wood-shingled houses built in the famed Cape Cod saltbox design, and the Sandwich Glass Museum, where hundreds of locally produced 19th- and early-20th-century collectibles, from kitchenware to lamps, are on display.

But like many first-timers, what I most want to do is visit Sandwich's famed antique automobile collection at the Heritage Museums & Gardens, a former private estate. Some 34 classic cars are housed in a Shaker-style round stone barn. ("The Shaker concept was that no devils could leap out at you if there were no corners for them to hide," Charles Stewart Goodwin, acting director of Heritage, tells me.) The collection includes a 1909 White Steamer, a 1912 Mercer Raceabout, a 1932 Auburn Boattail Speedster—and my favorite, a 1930 Duesenberg.

This one happens to have been owned by Gary Cooper. The star had the chassis painted yellow and lime and the seats upholstered in green leather. "He and Clark Gable used to race their Duesenbergs down the streets of Hollywood," says Goodwin. That's not the sort of behavior that would be tolerated along 6A. But then again, tasteful restraint, rather than glamorous excess, has always been the hallmark of this remarkable American conduit to our past.

Writer JONATHAN KANDELL *is based in New York City. Photographer* JARED LEED *lives in the Boston area.*

JOSE AZEL / AURORA

On the last stretch of 6A, near North Truro, the bayside Days' Cottages beach colony has welcomed vacationers since 1931.

Healing Arts

At Ojo Caliente, site of New Mexico's ancient hot springs, an artisan revives the craft of Native American pottery

BY PAUL TRACHTMAN

The 125-year-old spa compound (a barn soars to 45 feet) comprises four mineral springs and 1,000 acres.

KENT BARKER

New Mexico has beckoned as a land of enchantment ever since Spanish conquistadors invaded it in the 16th century, searching for riches. While they never found fabled streets paved with gold, some of Coronado's footsore soldiers may have been just as happy to stumble on the mineral hot springs known as Ojo Caliente, some 50 miles north of present-day Santa Fe.

Each of the four springs bubbling up from an underground volcanic aquifer has a distinct mineral content and, according to local beliefs, its own healing properties. The Indians put enough faith in these waters to build several pueblos in the hills surrounding them. The villages were abandoned shortly before the Spaniards arrived, but their ruins are still visible to hikers who climb primitive dirt trails above the town.

Investor Antonio Joseph developed Ojo Caliente into a privately held health spa in 1880, when New Mexico was still a territory and its governor, Lew Wallace, was dealing with Apache raiding parties and Billy the Kid and writing his novel *Ben-Hur*. In addition to its spa, Ojo Caliente boasted a post office and general store, whose customers included frontiersman Kit Carson. By the 1930s, the place was renowned as a sanitarium, offering 21-day cures for everything from rheumatism to gallstones. Today, Ojo Caliente has become a haven for anyone seeking respite from the stresses of modern life.

In 2000, the new owners of the spa, Sherman and Joyce Scott, began looking for ways to draw on the region's rich Native American heritage. They invited Apache master potter Felipe Ortega to offer five-day workshops in traditional Indian coil-and-scrape pottery making, using mica-rich clay dug from nearby hills. Many participants have never made a pot before. "People come here and don't know what Ojo Caliente is all about," Ortega says. "They [have heard of] the springs, but few know the pueblo history. They don't even know there was a village up there above the springs. I want people to get an American Indian experience."

Students join him in sprinkling cornmeal on the ground as an offering. Then the novice potters set to work, plunging their hands into moist clay. First, one slaps a ball of clay into

Guests at the historic Spanish-mission style hotel (right) may study with master potter Felipe Ortega (below right). He apprenticed with a 90-year-old Apache artisan, Jesucita Martínez, from whom he says, "I discovered my livelihood."

a flat tortilla-like form, which is then placed in a *puki*, a shallow bowl that supports the pot as it is built up. Ortega demonstrates how to roll a smaller ball of clay between the palms, shaping it into a perfectly even coil, which is then pressed around the base. One coil is added to another to raise the wall of the pot. Simple—until one tries it oneself. Yet remarkably, by the end of the first day, everyone has practiced the skills needed to shape beautiful pottery.

Once the wall of a pot is built, one uses a straight-edge scraper to finish the outside; a curved scraper is used inside. As the inner wall is smoothed, the pot bulges outward, taking on the shape of a bean pot, water jug or corn bowl.

In a recent workshop, Ortega asked students what kinds of pots they wanted to make. One replied that she intended to create "a prayer pot," used in Buddhist tradition to hold prayers written on slips of paper. "Not with this clay!" the teacher snapped. "This is the only clay you can put on an open fire, right on top of the stove. You can make a prayer pot with any other clay." The student opted for a soup pot.

Ortega, 53, grew up in the nearby village of La Madera, a back-road cluster of old adobe houses, in a family with Apache, Hispanic and Sephardic-Jewish roots, and a traditional appetite for beans. But as a teenager, he recalls, he rebelled against his mother's aluminum pressure cooker. Beans cooked in clay taste sweeter, he says. He found an Indian potter in the next village. "But she was 90 years old and blind, and couldn't make pots anymore. So she offered to teach me how," he recalls. As soon as he began making pots, he was hooked. "All I wanted was a bean pot," he says, "and I discovered my livelihood."

The spa at Ojo Caliente offers workshop participants lodging in a historic Spanish-mission style hotel on the 1,000-acre grounds, with access to the hot springs and treatments, including herbal and mud wraps, as well as a first-class restaurant. Additionally, former U.S. Forest Service archaeologist Martha Yates leads hikers up to the pueblo ruins in the hills.

What Ortega promises is an opportunity to experience the creative process. "A lot of people say to me that I teach more than just pottery," he says. "They come away with a different understanding of their lives, because pot making definitely tells you what your life is about."

PAUL TRACHTMAN, a writer and painter, lives in rural New Mexico. Photographer KENT BARKER *is based in Taos, New Mexico.*

KENT BARKER (2); MAP: ERIC HANSON

Shore Bird

Architect Santiago Calatrava created an urban landmark in the guise of an addition for the Milwaukee Art Museum

BY TERAH U. DEJONG

In 1994, the Zurich-based architect Santiago Calatrava got a call inviting him to submit a design for a proposed addition to the Milwaukee Art Museum. He promptly went to a map. "I knew it was in the Midwest, having been to Chicago," Calatrava says. But over the next seven years, the architect, 53, would become intimately acquainted with the city on the shores of Lake Michigan. Calatrava, who trained as an architect and an engineer, visited Milwaukee some 43 times to oversee the $95 million project, which was completed in October 2001.

The result was Calatrava's first structure in this country, the 144,000-square-foot Quadracci Pavilion, named for philanthropist Betty Quadracci and her late husband, Harry. "It's an extravaganza," wrote the *New Yorker*'s Paul Goldberger in 2001, "that says something about the exhilaration of well-crafted structures, and about the ennobling potential of public places." Now the architect, who was born in Spain and is best known for his bridges and train stations, is designing the glassed-in transit center for the World Trade Center site.

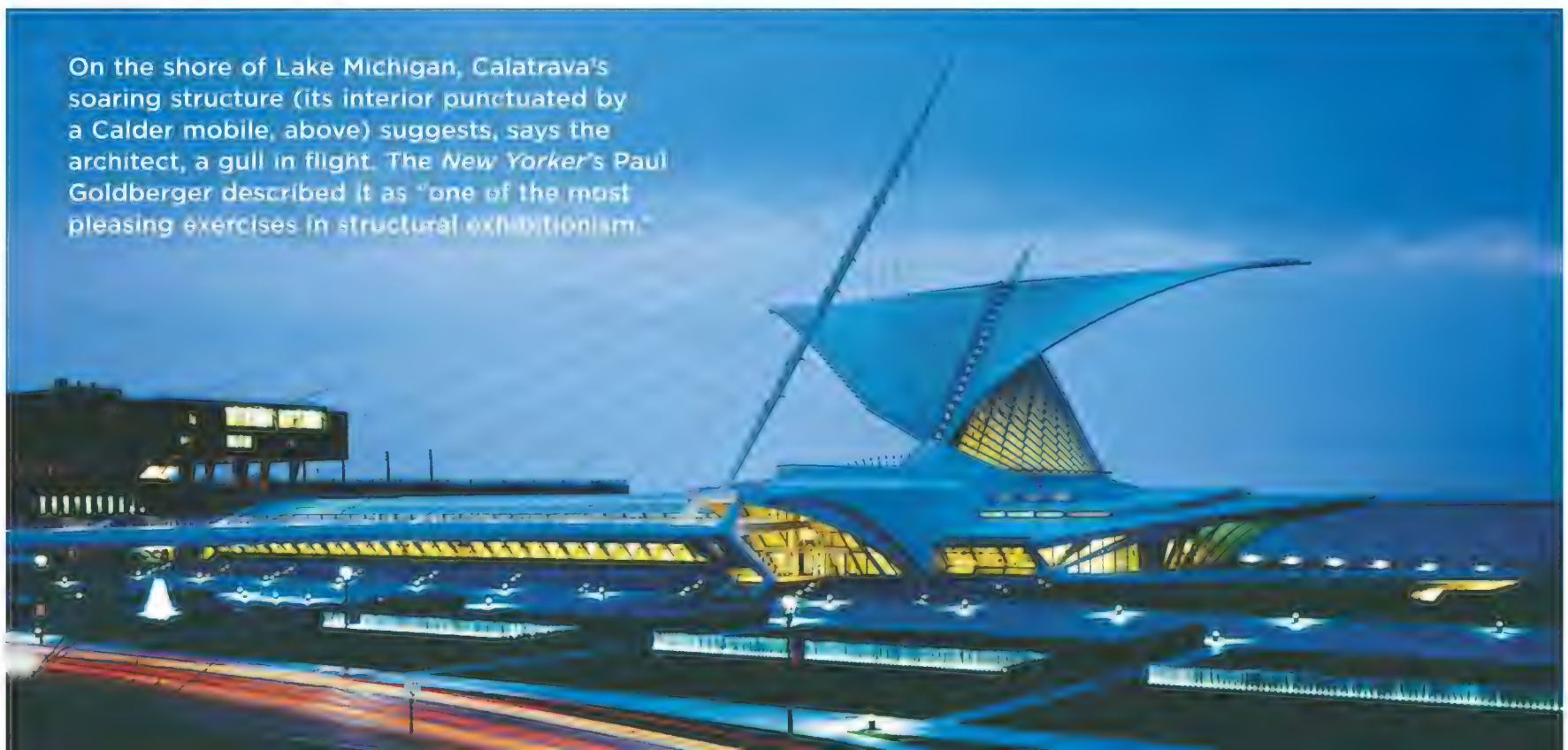
In Milwaukee, the exterior of the pavilion is configured as a glass-and-steel cone. The interior faces the lake, offering unimpeded views of water and sky. "I worked to infuse the building with a sensitivity to the unbounded, wind-swept grandeur of the lake," says the architect.

The structure's soaring glass roof, with a 90-foot apex, is fitted with a series of steel louvers that, when closed, function as a sunscreen. The two wings of the hinged roof are opened at 10 a.m. and closed at 5 p.m. most days. When they are open, the wingspan extends more than 200 feet. "You can imagine that roof as just about anything," said a recent visitor, "a bird, a plane, even a ship."

The Calatrava addition has drawn increasing numbers of visitors—500,000 in 2002, up from 160,000 the year before—to the 117-year-old institution's collections, which include old masters; a large number of works by Georgia O'Keeffe; folk art and Haitian painting; and 19th- and 20th-century American and European works.

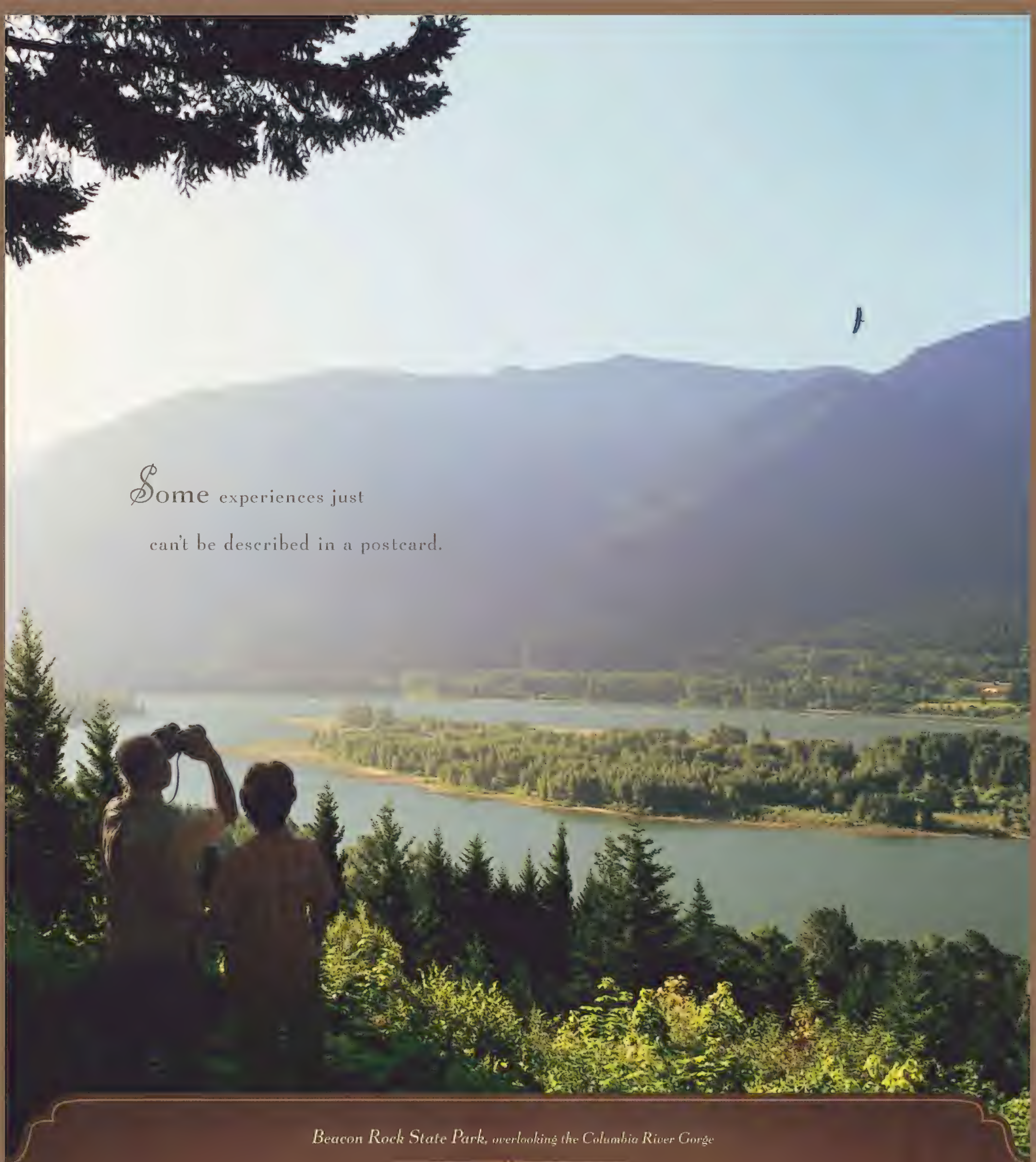
Calatrava calls the city of 596,000 a "well-kept secret" that earned an indelible place in his heart. He says his experience there, where he made many friends, was rooted in "the warmth of its people."

Writer TERAH U. DEJONG *is based in Providence, Rhode Island.*



On the shore of Lake Michigan, Calatrava's soaring structure (its interior punctuated by a Calder mobile, above) suggests, says the architect, a gull in flight. The *New Yorker*'s Paul Goldberger described it as "one of the most pleasing exercises in structural exhibitionism."

TIMOTHY HURSLEY (2)



Beacon Rock State Park, overlooking the Columbia River Gorge

There's so much to discover along the historic Lewis & Clark Trail. Majestic views. Rarely seen birds and wildlife. And a true understanding of how Lewis and Clark must have felt, seeing all this beauty for the first time two centuries ago. It's just one of Washington's 25 scenic byways, each guaranteed to transport you to a whole new state of mind. To plan your road trip, visit our website or call 1-800-544-1800.

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Footpath Atop the West

Since the 1930s, the 2,650-mile Pacific Crest Trail, extending from Mexico to Canada, has beckoned young and old

BY DONOVAN WEBSTER

FROM 8,000 FEET UP the side of San Jacinto Peak in Southern California, Interstate 10, at the base of the gorge, snakes through the San Bernardino Mountains and enters the Mojave Desert. Ahead of me to the north rises the snowcapped cone of 11,502-foot San Gorgonio Peak, the tallest mountain in Southern California. The sprawling Los Angeles Basin is northwest and, somewhere beyond, the Pacific Ocean.

That I was able to take in such an astonishing vista at twilight on a cool autumn evening can be traced to a visionary idea, conceived in 1926, that led to the creation of the Pacific Crest National Scenic Trail (PCT), a 2,650-mile high-country footpath extending from the U.S.-Mexico border to Canada. Like its better-known East Coast equivalent, the 2,100-mile Appalachian Trail, the PCT constitutes one of the most extraordinary wilderness treasures in the nation.

It is layered with history, crisscrossing many of the California peaks and canyons that naturalist John Muir trekked in the 1860s and '70s, and the Yosemite backcountry immortalized by photographer Ansel Adams. There's even the stretch in Washington's Cascade Mountains where Supreme Court Justice William O. Douglas was thrown from his horse and broke 13 ribs—necessitating hospitalization and preventing his attendance at the court's opening session in October 1949. "Growing up in Washington State, the PCT was the quintessential experience for our backpacking forays," says U.S. Forest Service official Tim Stone, trail manager for the footpath.

Demanding though certain segments are—the glaciers of the High Sierra, for instance—much of the PCT is surprisingly manageable, with gradual inclines that allow backpackers, in some places, to trek twice the distance they could manage in a day on the Appalachian Trail. This accessibility lures day hikers as well, perhaps 10,000 or so each year.

It's not all breathtaking scenery. Beginning late in 2003, a series of natural disasters—from catastrophic forest fires to torrential floods—hit the ridgeline. For the first time since the PCT was proposed 73 years ago, a leg of it, 45 miles long, has virtually ceased to exist, washed out by a deluge in Washington State's Cascade Mountains. "We knew almost immediately," says Stone, "that the most remote, the most inaccessible section of the trail was gone."

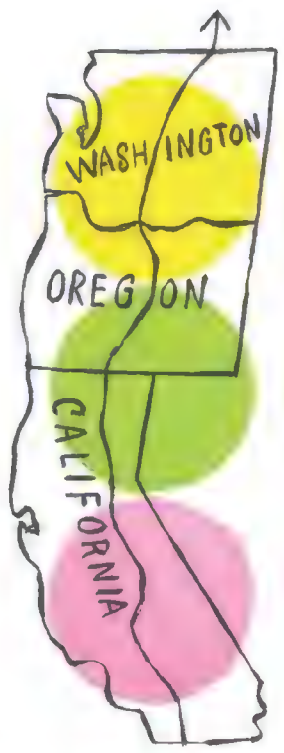
It was Catherine Montgomery, a 59-year-old teacher from Bellingham, Washington, who came up with the notion of a

Pacific Crest Trail vistas (the Cascades' ridgeline, above, and Pasayten Wilderness, opposite) have inspired generations of hikers. Supreme Court Justice William O. Douglas recalled a Cascade trek he made in 1914 at age 16: "We commanded the whole scene as if we were on the spire of a cathedral."

AGEFOTOSTOCK / SUPERSTOCK

ridgeline track from Canada through the mountains of Washington, Oregon and California to Mexico. She saw "a high trail winding down the heights of our western mountains with mile markers and shelter huts."

Within a few years, Clinton Clarke, a California publisher, philanthropist and outdoorsman, had embraced the idea and proposed it to the U.S. Forest Service and to the National Park Service. In March 1932, he published the first Pacific Crest Trail handbook. Although his descriptions could be sketchy ("The trail goes east of Heart Lake, then south across granite fields . . . "), the guide vastly increased the trail's popularity. For the next four summers, Civilian Conservation Corps workers and YMCA youngsters began constructing it.



IN 1970, an 18-year-old "southbounder," Eric Ryback, became the first person to walk the entire route. He published an account of his north-to-south trek, *The High Adventure of Eric Ryback*, a year later. The book instilled a fascination with the PCT in many a reader, including me, who came across it as a sixth grader.

Traversing the length of the PCT was not easy then—or now. Thirty-five years after that first through-hike summer, only 800 individuals are known to have made it all the way, some 1,445 fewer than have conquered Mount Everest.

"I'll tell you why PCT through-hikers are so rare," says Jim Hilton, 70, a Seattle attorney who walked it from Mexico to Canada—considered the easier direction—in 1988 with his wife, Peggy. "The PCT requires three to seven months of daily dedication. Every day, you have to get a minimum of 20 miles behind you, or you won't make it to Canada before the snow flies. And it's incredibly demanding. Mount Everest goes—what?—five miles into the sky? While you're traveling 2,600 miles south to north on the PCT, you also make 85 miles in elevation changes. Think about it: not only are you hiking 2,600 miles, you're climbing 85 miles straight up!"

MY OWN TRUNCATED TREK began at the Mexican border, a mile south of Campo, California, a hamlet of 3,122. There, on a desert hillock edged by a six-foot-tall fence running east to west along the Mexican border, an unprepossessing stand of five 12-by-12-inch cedar posts marks the trail's beginning: SOUTHERN TERMINUS PACIFIC CREST NATIONAL SCENIC TRAIL. ESTABLISHED BY ACT OF CONGRESS ON OCTOBER 2, 1968.

I set off on foot, north across the desert. The vegetation edging the trail is chest-high and thorny; each of my footsteps erupts in a puff of dust. Although it is late November, the sun is hot; I am glad I carry a canteen. I am completely alone; there is not even so much as another boot print in the powdery dirt.

MAP: ERIC HANSON; BART SMITH

I see evidence of the fires that devastated the PCT a few months before, inside Mount Laguna Recreation Area, an hour east of San Diego in the Cleveland National Forest. Golden grasses sway in the shade of black oaks; in the distance, mountains and deep valleys stretch to the horizon.

Then, as I crest the brow of a hill, I confront a wasteland: everything has been blackened by fire. The landscape is not merely singed—it is saturated in an intense, unsettling ebony. The catastrophic Cedar Fire of October and November 2003 devastated more than 100,000 acres here.

IT TAKES ME SEVERAL DAYS of hard hiking to leave the charred landscape entirely behind. Then, late one afternoon, I reach a stretch of trail high above Idyllwild (pop. 3,583), in the San Bernardino National Forest east of Los Angeles. To the west, the sun is sinking low. Suddenly, above the smoggy haze of the San Fernando Valley and Los Angeles beyond, a kind of shimmer glows in the distance. Soon, the light is blinding: the sun, sliding toward the horizon, glances off the surface of the Pacific, perhaps 70 miles away. A sudden flash meets my gaze—some 9,000 feet above sea level.

Between the trail where I stand and the shoreline of the Pacific, this stretch of California is inhabited by perhaps 17 million people. Not one of them, it occurs to me, has the privilege of taking in this view. According to through-hikers, I am experiencing a moment invested with "trail magic."

Pester any PCT trail hiker long enough and he or she will divulge a trail-magic story. Most will also claim there are places where this elusive force concentrates. It may be found, they maintain, in the vicinity of "trail angels"—those largely anonymous individuals who, in fealty to the PCT, spend their own time and effort repairing trail washouts, lugging gallons of water into arid campsites (one day to be used by grateful through-hikers) and providing all manner of assistance and shelter.

Trail angels Jeff and Donna Saufley of Agua Dulce, California, are the keepers of a guesthouse on their compound-style property; the way station is known to through-hikers as the Agua Dulce Hilton. In 1996, shortly after moving onto their place on the outskirts of the village, Donna—a friendly woman in her 40s who works in mortgage finance—began allowing through-hikers to stay overnight in the family guesthouse. Before long, word got around that should a hiker want to send provisions ahead—thereby lightening his or her load—the Saufleys would keep the supplies in their garage. Now, in any given year, several hundred hikers spend the night at the Saufley's guesthouse, enjoying free access to a hot shower, washing machine, cable TV and gas grill.

"The truth is," says Donna, "we're the recipients of the trail's real magic. We've made decade-old friends because of

In 2003, flooding in the Cascades (park official Tim Stone surveys damage along the Sauk River, below) destroyed a 45-mile section of the trail. Failure to restore the ravaged passage, Stone insists, would constitute "an unfathomable loss."

DAN LAMONT

BART SMITH

Describing the view from above Southern California's Gold Canyon (where trekkers follow a dusty trail, above), hiker Karen Borski marveled in her Web log at "treeless mountains and deep canyons, no roads or people as far as the eye could see."

this." Adds Jeff: "The amazing thing is that when we moved in here, we didn't even know the Pacific Crest Trail went just past our house. None of our neighbors knew it went past their houses, either. Now this amazing human flood comes through every year. We still hear from hundreds of hikers every Christmas."

MORE THAN 800 miles beyond the Saufleys (a distance I cover by plane), the trail descends Oregon's Mount Hood toward the Columbia River Gorge, the mile-wide chasm separating Oregon from Washington. As I climb to 1,000 feet, I reach an elevation where the early December rain turns to snow; Douglas firs are blanketed in white. The path dips sharply and snow gives way to gentle rain. Occasionally, the cloud cover thins, revealing Greenleaf Peak and Hamilton Mountain, rising into sunshine across the Columbia River in Washington's Gifford Pinchot National Forest.

By the next day, the December weather worsens, bringing my trek to a halt. It's almost Christmas. I drive the 200 miles to Darrington, Washington, where PCT forest official Tim Stone who is based in Vallejo, California, has agreed to meet me. With Gary Paull, who manages the section of the trail hardest hit in the Cascades, Stone shows me slides of the once-in-a-century flooding that destroyed parts of the PCT here: roads washed away; reinforced concrete bridges reduced to rubble; Douglas firs—each 150 feet tall with roots intact—hurtled downriver and tossed around like pick-up sticks. "To make a new trail," says Paull, "costs about $60,000 a mile for a 24-inch-wide trace over decently graded land. In some places—where it's steep or there are sheer rock faces—the cost goes far higher."

Today, PCT officials have created a detour around the 45-mile section of footpath obliterated by the deluge. The temporary loop, says Stone, will allow through-hikers to complete their treks. Meanwhile, PCT staff have not been able to assess how many miles of trail have been buried in the mudslides that have hit Southern California since December.

At the same time, Stone and his colleagues await news of federal funding to restore the PCT. Estimates are that $2 million would be needed to repair the trail in Southern California and to reconstruct the PCT in Washington. "The Pacific Crest Trail," says Stone, "is arguably the premier long-distance trail in the world; we can compare it to Yellowstone or some of our other wilderness icons. It would be an unfathomable loss if this national treasure were not restored."

Writer DONOVAN WEBSTER lives in Charlottesville, Virginia.

Rapture of the Deep

Pennekamp State Park—the nation's first coral-reef sanctuary—protects a thriving ecosystem beneath the waves

BY MARIALISA CALTA

THE CORAL-REEF formations are eerily vivid through transparent panels in the glass-bottom boat. Rainbow parrotfish—their brilliant markings doing justice to their name—glide above the reef, flanked by black-and-white-striped sergeant majors, bluehead wrasses, black groupers, yellowtail damselfish. A spotted eagle ray sweeps into view as translucent moon jellyfish waft by.

A coral reef is a complex world unto itself, an elaborate ecosystem whose denizens range from microscopic zooxanthellae (organisms that give coral its color) to 3,000-pound Atlantic manta rays. Parrotfish ingest coral and rock as they graze on algae, and excrete the sediment as fine sand. Shrimp scavenge decayed food morsels from the teeth of moray eels. Blowfish consume crustaceans. The millions of tiny polyps that compose the coral ensnare and devour tiny organisms.

At John Pennekamp Coral Reef State Park in Key Largo, the first undersea preserve in the country and the most-visited state park in Florida, more than a million people each year discover an underwater reality light-years removed from the endless sprawl of T-shirt and sandal shops, restaurants and discount stores crowding the route south from Miami into the Upper Keys.

Snorkelers (opposite, exploring the *Christ of the Deep* sculpture) and hikers (above, crossing a mangrove swamp) encounter an extraordinary concentration of marine life (below, a queen angelfish). The park covers some 178 nautical square miles.

Pennekamp was named after a 1950s Miami newspaperman who, along with University of Miami marine biologist Gil Voss, fought to set aside the area as a park. Along with the adjacent Florida Keys National Marine Sanctuary, the preserve covers approximately 3,066 nautical square miles and protects the largest living coral reef system in the continental United States. Some 25 miles long, the reef extends east into the Atlantic for three miles, at which point one enters federal sanctuary waters.

Visitors can explore the reef from a glass-bottom boat, on snorkeling tours or on scuba-diving expeditions (a one-day "resort course" is available, enabling even a neophyte to take the plunge). Powerboats, canoes and kayaks also are available for rent. A water trail for paddlers winds among tangled roots of mangroves, trees that live in saltwater. The roots provide a haven for birds and a "nursery," as park biologist Chris Rader describes it, for fish as well as shrimp and other crustaceans. Fine snorkeling can be had right off the beach, and a boardwalk wends its way through the mangrove swamps.

The primary attraction, however, remains the coral reef, an organism between 5,000 and 7,000 years old. "These are probably the oldest living animals you'll ever see," says Rader. A coral, he explains, is a type of soft invertebrate called a polyp; as corals grow, they excrete a calcium-carbonate (limestone) exoskeleton, which builds up under the polyps to form the reef. This particular reef—crisscrossed by sandy channels and sea-grass beds—contains one of the most diverse populations of marine plants and animals in North America.

While the glass-bottom boat tours provide a good introduction to the reef, snorkeling or scuba diving is far more rewarding. As a myopic glasses-wearer, I was delighted to find I could rent a corrective mask for a mere $5. Half an hour later, with fins, snorkel and mask, I explored the waters above Grecian Rocks, one of the most popular snorkeling sites in the Upper Keys. As I had no "snorkel buddy," a group of Ukrainian women from New York City—convulsing with laughter as they taught me to yell help in Russian (*Pomogitiye!*)—invited me on their outing. My sharp-eyed companions pointed out barracuda and a nurse shark, lying quietly in the shallows.

Outdoors enthusiasts practice the adage "Take only pictures; leave only footprints." The staff and volunteers at Pennekamp amend that admonition: "Take only pictures; leave only bubbles."

MARIALISA CALTA, who is a freelance writer in Vermont, frequently reports on travel.

DAVE G. HOUSER / CORBIS; P. 110 MAP: ERIC HANSON; P. 110 AND P. 111 BOTTOM: TOM STACK / TOM STACK & ASSOCIATES

Just What the Doctor Ordered

After Prohibition went into effect, an odd alliance of special interests argued that beer worked wonders on a host of ailments ~ BY BEVERLY GAGE

Despite the Volstead Act (authorities empty beer barrels into the street c. 1920s), bootleggers and speak-easies flourished.

IN 1758, young George Washington decided to seek a seat in the Virginia House of Burgesses. He had been stymied in an earlier bid, he believed, by one crucial error: he had not "treated" the voters properly—which is to say, he had not provided them with sufficient alcoholic refreshment. This time, determined to correct his ways, he purchased some 144 gallons of wine, rum, hard cider, punch and beer for distribution to supporters. At more than two votes per gallon, Washington's effort proved successful, launching a rather distinguished career in American politics.

More than a century and a half later, after the American temperance movement had finally won its fight to prohibit alcohol, a considerable percentage of the nation's populace remained staunchly faithful to the founders' tradition, using their ingenuity to acquire any and all available alcohol. They drank hair tonic, flavoring extracts and patent medicine. They patronized speak-easies and bootleggers, helping to boost a nationwide industry of organized crime. They stole liquor from government warehouses. They posed as priests and rabbis to acquire sacramental wine.

And in the early months of 1921, a dedicated group of brewers, physicians and imbibers attempted to convince the U.S. Congress that beer was nothing less than vital medicine. Whatever craven thirsts might have inspired its advocates, the right of physicians to prescribe "medical beer" was the subject of intense national debate, drawing the attention of officials at the highest levels of government and provoking arguments within the American Medical Association and other professional groups.

The arguments had less to do with the number of likely prescriptions (no-

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body thought beer would replace castor oil) than with the long-term implications of legalizing the consumption of beer. It was what politicians today call a wedge issue: unimportant, even ridiculous, in itself, but with potentially vast legal and cultural consequences. (The U.S. Supreme Court has agreed to take up the far more medically significant question of medical marijuana by June of this year.)

As with all wedge issues, technical details masked a host of larger and more far-reaching concerns. Both supporters and detractors understood the so-called "beer emergency" as a referendum on Prohibition itself, a test of the federal government's right to regulate vice and dictate professional standards.

Prohibition, which became the law of the land in January 1920, was the product of enormous middle-class energy dedicated to eliminating sin—gambling, drinking, anarchy, sloth—through legislation. Within this crusade, beer was hardly a neutral substance. As the favored drink of the German and Irish working class, it was shorthand in temperance circles for disorderly taverns, abandoned wives, laziness, unemployment—even, during World War I, anti-Americanism. According to temperance advocates, Prohibition's destruction of the saloon marked nothing less than a triumph of order over disorder, self-control over dissipation.

Yet the 18th Amendment to the U.S. Constitution did not amount to a complete "prohibition" on all forms of alcohol. It banned only the manufacture, sale or transportation of alcohol "for beverage purposes"—in other words, for the pleasure and delight of socializing and inebriation. This directive covered a substantial proportion of the nation's imbibers, to be sure, but it also left open certain loopholes for the framers of the Volstead Act, the federal law that finally put the amendment into effect. It excluded all alcohol—mainly sacramental wines—consumed for religious purposes. Hair tonics, perfumes, toilet waters and other cosmetic products were similarly exempt. Not least, it excluded alcohol prescribed by

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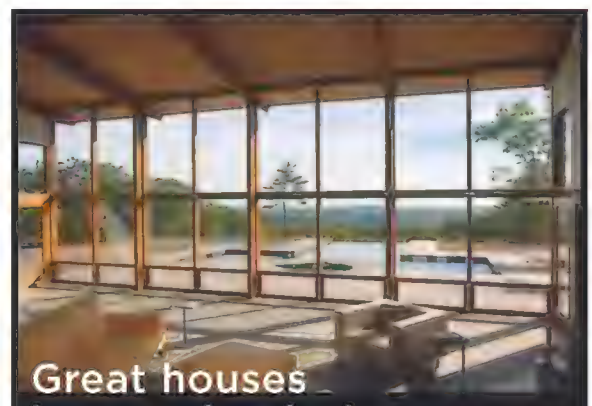
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The beer campaign, said temperance advocates, could lead only to "chaos" and "Bolshevism."

physicians as a treatment for any number of acute and chronic ills. It was in the context of this last exemption that the fight over "medical beer" unfolded.

Temperance advocates denounced the "medical beer" campaign as an attempt to play fast and loose with the law—an effort, they said, that could lead only to "chaos" and "Bolshevism." Prohibition's opponents, by contrast, urged the measure as nothing less than a matter of life and death. "Since Prohibition went into effect I have been approached by a number of physicians who appealed to me for beer on the ground that it was absolutely necessary for the welfare of their patients," brewer Col. Jacob Ruppert, who owned the Yankees from 1915 until his death in 1939, told a *New York Times* reporter. "I was not in a position to help them."

The idea of alcohol as medicine was not new. As historian W. J. Rorabaugh wrote, Americans in the early 18th century classified whiskey, rum and other liquors as "medications that could cure colds, fevers, snakebites, frosted toes, and broken legs, and as relaxants that would relieve depression, reduce tension, and enable hardworking laborers to enjoy a moment of happy, frivolous camaraderie." Even the dour Puritan minister Cotton Mather, fearful enough of sin and subversion to help purge Salem of witches, believed that alcohol, used in moderation, could be "a *Creature of God*."

Once Prohibition took effect, many doctors championed alcohol as medicine. "I have always maintained that every family ought to have an alcoholic stimulant in the house all the time," one

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BEVERLY GAGE teaches history at Yale. She is writing a book about the 1920 bombing of Wall Street.

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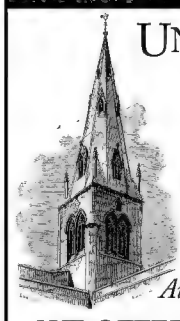

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physician told the *New York Times*. "There is nothing more valuable in emergency." The doctor himself always took a drink at the end of the day—"It braces me up," he explained—and often prescribed it for patients stricken with "nerves." For pneumonia, he recommended a shot or two of whiskey.

But if many doctors conceded the efficacy of hard liquor, the case of beer was rather more controversial. Beer's champions often pointed to its relaxing qualities, and to its nutritional value. In a lengthy ode to British ale, for instance, one writer suggested that beer was so chock-full of vitamins that it had saved the "British race" from extinction during food-scarce plague years.

Other healers questioned such claims. Dr. Harvey Wiley, a prominent physician and an architect of the nation's first food and drug laws, could barely contain his contempt for those who subscribed to such folk remedies. "There are no medical properties in

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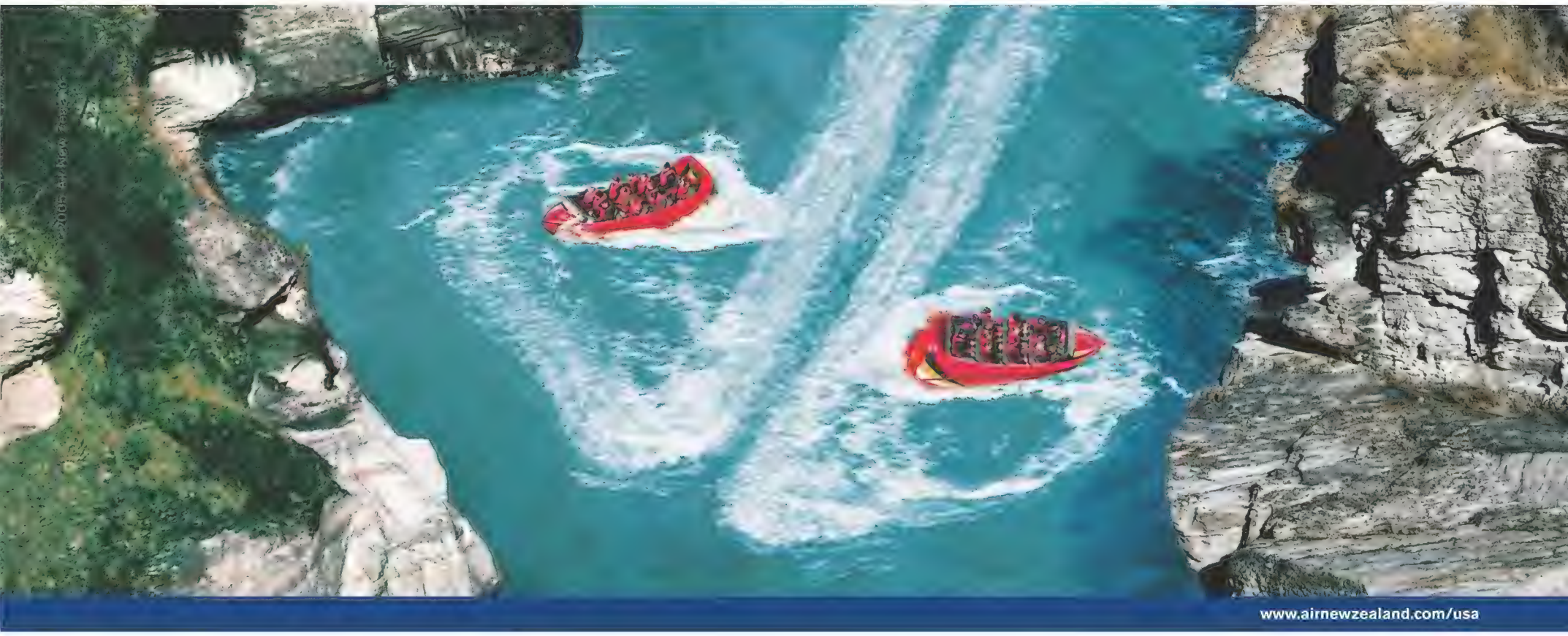
Attorney General A. Mitchell Palmer's pro-beer ruling whetted debate appetites.

beer, whatever may be said of it as a beverage," he pronounced in March 1921. "I never saw a prescription which contained beer as a remedial agent."

By 1921, Wiley could point to a great deal of recent scientific evidence to support his contention. In 1916, with Prohibition not yet enacted, the American Medical Association had declared alcohol's supposed medicinal properties entirely unsupported by research. "Its use in therapeutics, as a tonic or a stimulant or as a food has no scientific basis," read the AMA's resolution. The medical profession's official pharmacopoeia no longer listed alcohol as a medicine; to many doctors, and particularly to temperance advocates, this was as good as the final word. (Today, studies suggest that moderate drinking, particularly of red wine, may be beneficial to heart health.)

THE MAN to whom fate and presidential politics bequeathed the duty of deciding the medical beer question was Attorney General A. Mitchell Palmer. By the time the beer problem crossed his desk in early 1921, Palmer was under attack from civil libertarians for his harsh deportation campaign against foreign-



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"Will the druggists become bartenders and the drug store a saloon?" asked the *New York Times*.

born Communists and anarchists, best known as the "Palmer Raids."

He was also on his way out of office. The previous November, voters had elected Republican Warren Harding to the presidency—a development that meant that Palmer, along with other Wilson appointees, was out of a job. Before leaving office, however, Palmer, under pressure from brewers, determined to make it possible, once and for all, for sick men to get their beer.

On March 3, 1921, shortly before his last day as attorney general, Palmer issued an opinion declaring that the "beverage" clause of the 18th Amendment entitled doctors to prescribe beer at any time, under any circumstances and in any amount they saw fit. Wholesale druggists could take charge of selling beer. He also suggested that commercial drugstores could sell it from their soda fountains—though "never again beer over the saloon bar or in the hotel dining room."

But rather than settling the debate, Palmer's opinion set off a new round of court challenges, squabbles and questions. "Will the druggists become bartenders and the drug store a saloon?" the *New York Times* asked that November. "Will the doctors become beer dictators and be overwhelmed by those who are thirsty because they are sick, or merely sick with thirst?"

Beer-makers, unsurprisingly, were sure that Palmer had hit upon a perfect fusion of virtue and science. "Brewers Jubilant over 'Medical' Beer," the *New York Times* reported on March 11. Doctors as a group were perhaps less so—"I don't think doctors are vitally interested one way or another in permission to prescribe medical beer," the counsel of the New York Medical Society explained—but as a group seemed to take

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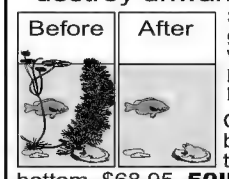

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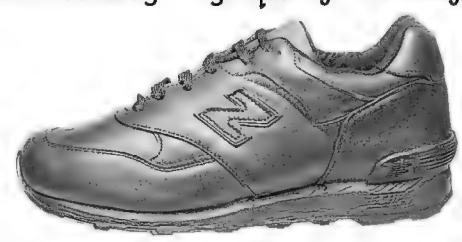

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satisfaction from Palmer's affirmation of their authority, seeing in it a victory of science over superstition.

Temperance reformers, by contrast, were furious at Palmer's betrayal—a first step, as they saw it, in undermining America's newfound self-control. "Many of the Anti-Saloon League sympathizers fear that the Palmer decision, if accepted, will lead to a loosening of the enforcement laws," read one news report. The Anti-Saloon League (ASL), one of the country's leading temperance groups, was particularly incensed at the suggestion that small children, seated cheerily at the neighborhood soda fountain, would be forced to witness beer's sale and consumption—a prospect which, according to ASL general counsel Wayne Wheeler, "makes clearer than ever the vice in this opinion." (He was joined in his lament by bootleggers, snake-oil salesmen and religious fakes who were loath to see pharmacists hone in on their trade.)

HENRY GUTTMANN / HULTON ARCHIVE / GETTY IMAGES

Before Prohibition, taxes on liquor provided two-thirds of federal revenues.

Had Palmer seen fit to restrict the consumption of medical beer in any way—by limiting the number of prescriptions, the amount that could be prescribed or the diseases for which it was sanctioned—organizations like the ASL might well have concluded that the handful of resulting prescriptions were not worth the fight. But the vision of giddy brewers reopening factories to produce millions of gallons of beer seemed too great an assault on their recent victory. "If beer is to be prescribed in any quantity for everybody who is ailing," predicted the *New York Times*, summarizing congressional opinion, "there will be no beer."

Within months of Palmer's decision, Congress had taken up the so-called beer emergency bill (officially, the Campbell-Willis bill), which limited wine and liquor prescriptions to not more than a half pint in ten days, and banned beer altogether. By the end of November 1921—much to the outrage of brewers and physicians who called the bill "a form of inhibition never before attempted in the history of legislative government elsewhere throughout the civilized world"—the bill had become law, putting an end to the strange brew known as medical beer.

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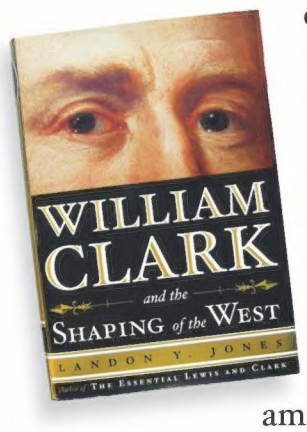
WILLIAM CLARK AND THE SHAPING OF THE WEST

LANDON Y. JONES
HILL AND WANG, $25.00

REVIEWED BY OWEN EDWARDS

IN A DEEPLY researched, splendidly written biography (a part of which appeared in SMITHSONIAN), *William Clark and the Shaping of the West*, Landon Y. Jones gives an impressive—if not always noble—American his due. In filling the gaps in our knowledge of Clark, who, along with Meriwether Lewis, led Thomas Jefferson's Corps of Discovery expedition (1804-1806), Jones also revivifies the complex and compelling period when the West didn't reach very far beyond the ramshackle settlement of St. Louis. In 334 pages, he sharpens the soft focus that tends to blur and compress our national historical view of the long struggle between European settlers and Native American tribes. In setting the stage for his close examination of William Clark's busy life—he outlived Lewis (who committed suicide in 1809) by 29 years and died at 68 in 1838—Jones vividly limns the tooth-and-claw savagery of the struggle for territory on both sides.



Much has been written about the expedition of the Corps of Discovery—Jones is the author of *The Essential Lewis and Clark* (the pair's edited diaries)—but after the fabled band returned, Clark began a long career as a military leader, chronicler, diplomat, territorial administrator and enforcer of the draconian Indian policies that largely contributed to, as the title states, the shaping of the West.

Jones is no hero worshiper, and he shows us Clark by turns enlightened, conniving and cruel. In the free-form society beyond the Appalachians,

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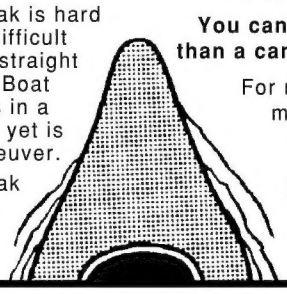

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where opportunity favored boldness, and ethical behavior was less than consistently applied, Clark did not hesitate to pursue his own aggrandizement. In today's world, he would be the kind of canny, compromised rascal who might end up in jail, or in politics.

His older brother George felt that the only way to convince Native tribes not to side with the British was to "excel them in barbarity," and this harsh attitude influenced William. He once had four captured Indians tomahawked to death in front of a besieged fort, and one eyewitness claimed Clark had personally taken part in the killings.

But later, when the Indians were rarely an equal force in battle and Clark served as Jefferson's superintendent of Indian affairs, his approach became more nuanced, taking into account political as well as military realities. Working as a direct representative of the federal government, Clark could be fair and helpful to tribes that went along with his edicts but ferocious to those that resisted. Jones points out that Clark honestly felt his tactics of removing Indians from land coveted by settlers was the only way to save them; the author quotes a number of contemporaries attesting to the man's humaneness.

Yet Clark was a willing executor of a Jeffersonian policy of economic servitude that created in Indians a hunger for consumer goods, then encouraged them to cede land to pay their debts. In a time when many states still recognized slaves as legitimate property, this may not have seemed beyond the pale, but it is hardly enlightened public policy, and its short- and long-term effects were devastating. In this essential biography, Jones looks on his subject's behavior with a humaneness of his own: "The cruelties of Clark's time and the strengths of his character did not contradict one another; they lived within him. He was a man whose complexity encompassed both."

Reviewer OWEN EDWARDS is a freelance writer who is based in San Francisco.

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Hugs and Kisses from the IRS

A kinder, gentler tax form is on the way – BY MARTIN MILLER

"There is no excuse for rude treatment by IRS personnel. They are on the public payroll, and their job is to serve the public."
—U.S. Senator Jim Jeffords (I-Vermont), member, Senate Finance Committee

STUNG BY CRITICISM about poor service, the Internal Revenue Service is determined as never before to win the hearts and minds of ordinary taxpayers. So the agency is revamping its most commonly used form, the 1040 EZ, to be more sensitive. Below is a prototype—the 1040 Project Uplift, Healing & Love Esteem EZ, or PUH-LEEZ.

Name: _____
Address: _____
Social Security number: _____
Favorite color: _____

Attach W-2 forms here, and requests for U2 tickets.
Total wages, salaries and tips: _____
Total wages, salaries and tips you deserved: _____

Use this form if:

a) You are a U.S. citizen;
b) Your taxable income was over $17,500 and under $100,000;
c) You enjoy sharing with people who won't judge you.

(Helpful IRS Hint: Are you overweight? Hey, don't beat yourself up about it. Try eating six or seven small meals a day instead of two or three big ones. You'll eat less, feel better and probably pay less tax.)

Please check the appropriate box:
Are you single? Yes___No___
Do you want to be single? Yes___No___
Do you tell people "I'm fine alone," but inside it hurts real bad? Yes___No___

(Helpful IRS Hint: Forget the bar scene. A great place to meet a future spouse is at adult education courses, a house of worship or a tax seminar. Why not include a recent photo with your tax return? Maybe we can help. After all, we know *everybody*.)

Are you married? Yes___No___
Do you "keep score" in your marriage? Yes___No___
Do you tell people "I'm fine with my marriage," but inside it hurts real bad? Yes___No___

Draw a picture of what you're thinking about right now. Use watercolors, acrylics, crayons—just express yourself. Don't be afraid to incorporate unicorns and rainbows.

How much money you earn tells us so little about you. Please share:

a) Do you know the difference between pinot noir and pinot grigio?
b) Could you spell pinot grigio if it weren't already spelled right here for you?
c) Is Linkin Park a person or a place?
d) Are you still living with your parents?
e) Do you wear a goatee?
f) Isn't it time to shave it off?
g) Can you name the commanders of the Army of the Potomac?
h) Which one was known as Old Fuss and Feathers?
i) Are you rooting for Brad and Jen to get back together?
j) Can you spot the trick question?
k) Were you shocked that in the movie *Alexander*, Angelina Jolie played the conqueror's mother?
l) Have you ever been aboard a UFO?
m) If so, did anything "funny" happen?
n) Is Pilates a person or an overpriced exercise routine?

Essay Section: Write about your hopes and dreams for all the taxes you paid. Don't be a sorehead!

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